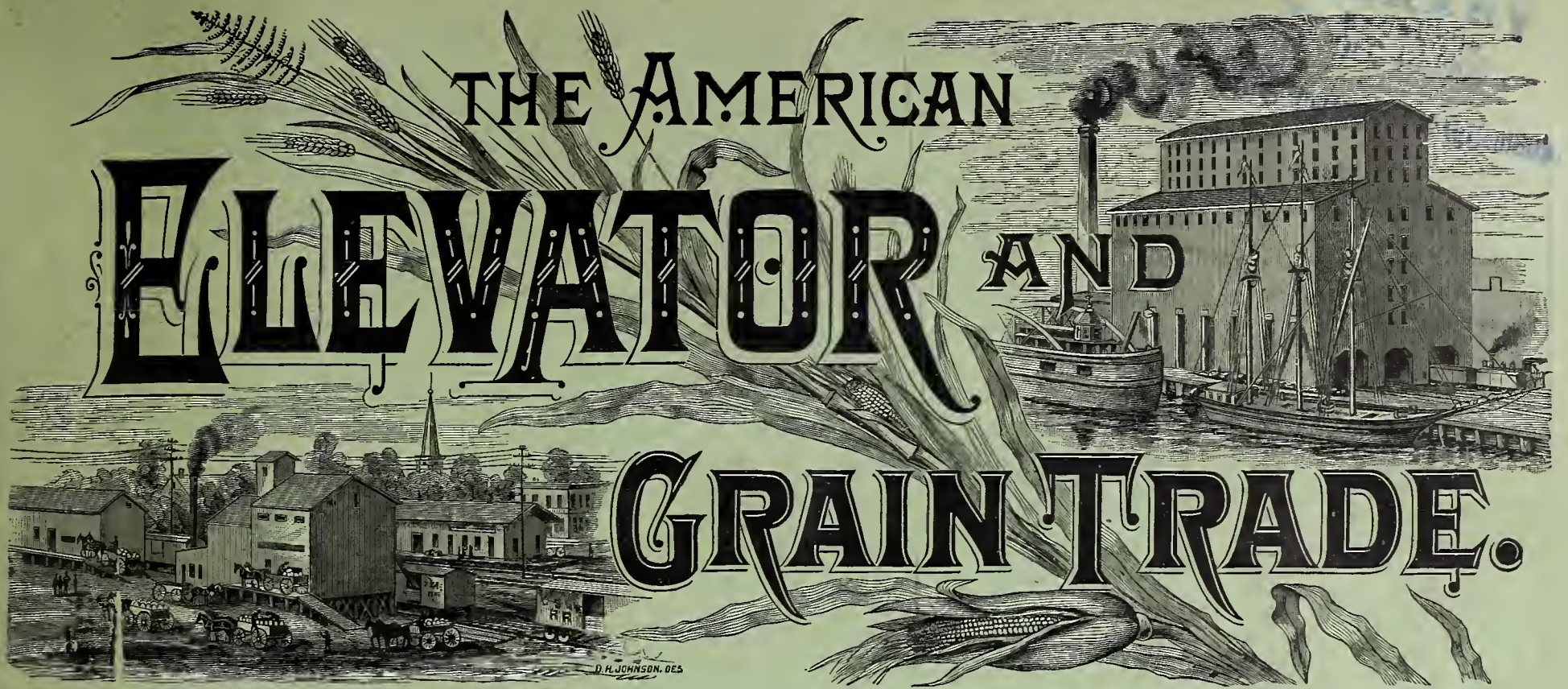


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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. & CO.

{ VOL XXVIII.

CHICAGO, ILLINOIS, DECEMBER 15, 1909.

No. 6.

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The Engine for the Grain Elevator

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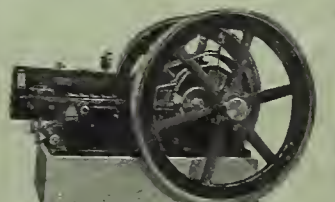
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The Right Combination to successfully handle this year's corn crop

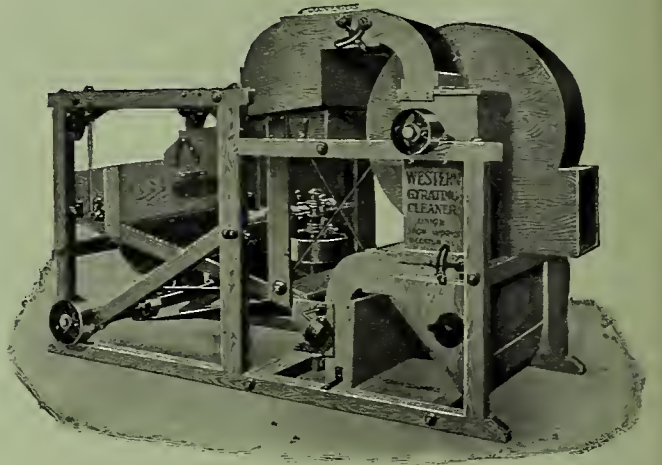
Poorly shelled and cleaned corn means NO GRADE every time.

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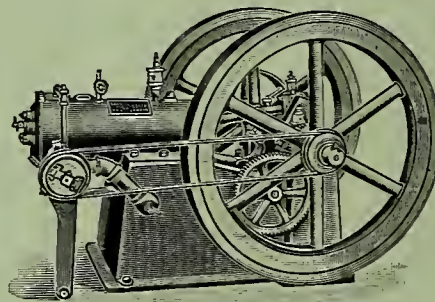
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It is the **EASIEST RUNNING SAFEST BEST**

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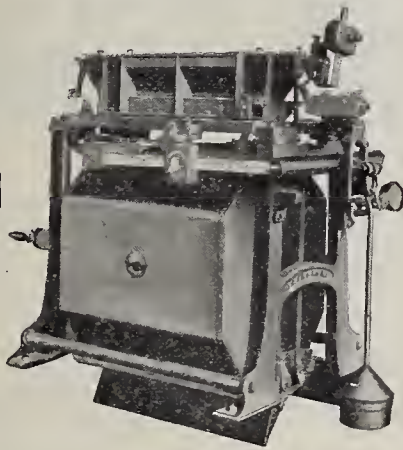
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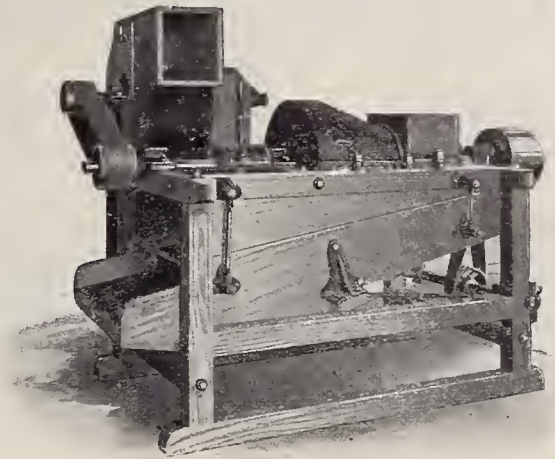
Put your mill or elevator on a modern business basis. No more losses through carelessness or inaccurate weighing. Faster, more convenient, and, above all, more accurate than any other automatic scale ever invented.

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The Ohio Corn Sheller and Cleaner Combined

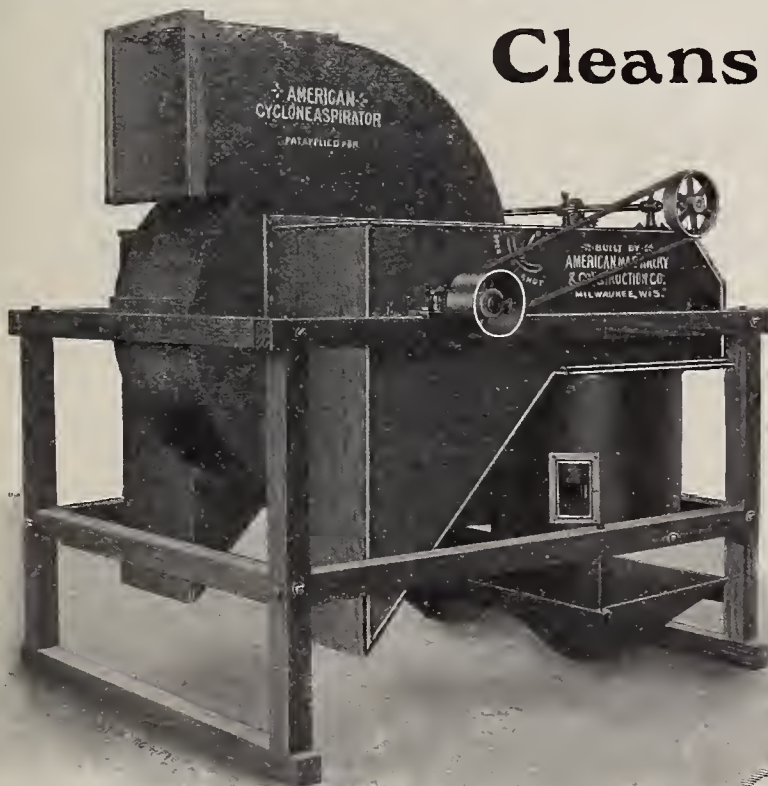


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of all foreign materials, such as chaff, dust and other impurities of a lighter specific gravity than the grain to be cleaned.

It is easily and quickly regulated to take out only the lightest dust, or to also take out oats and shrunken kernels from the heavier grain.

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remove any desired percentage of moisture from the grain, conditioning it for shipping or storage with perfect safety.

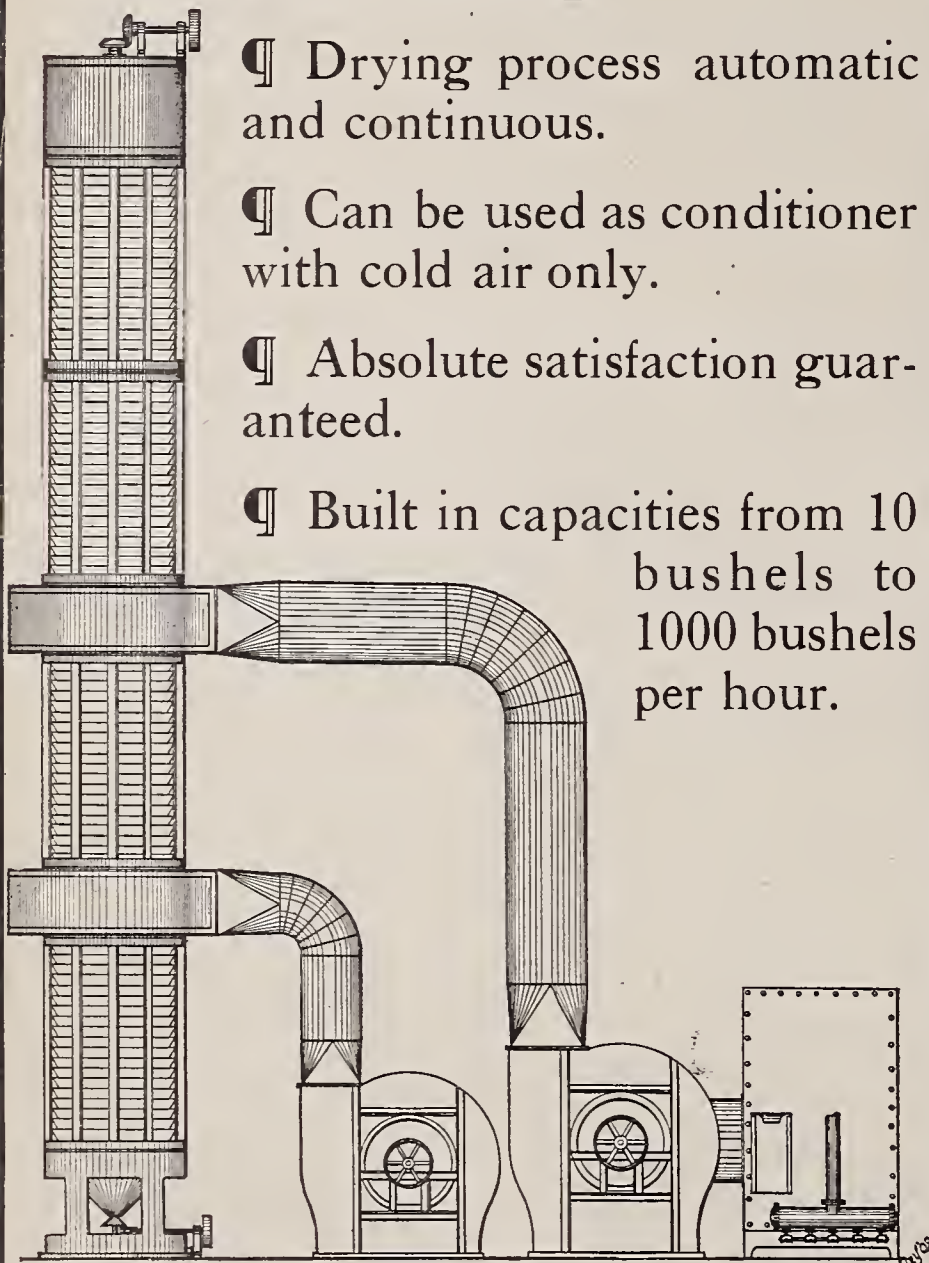
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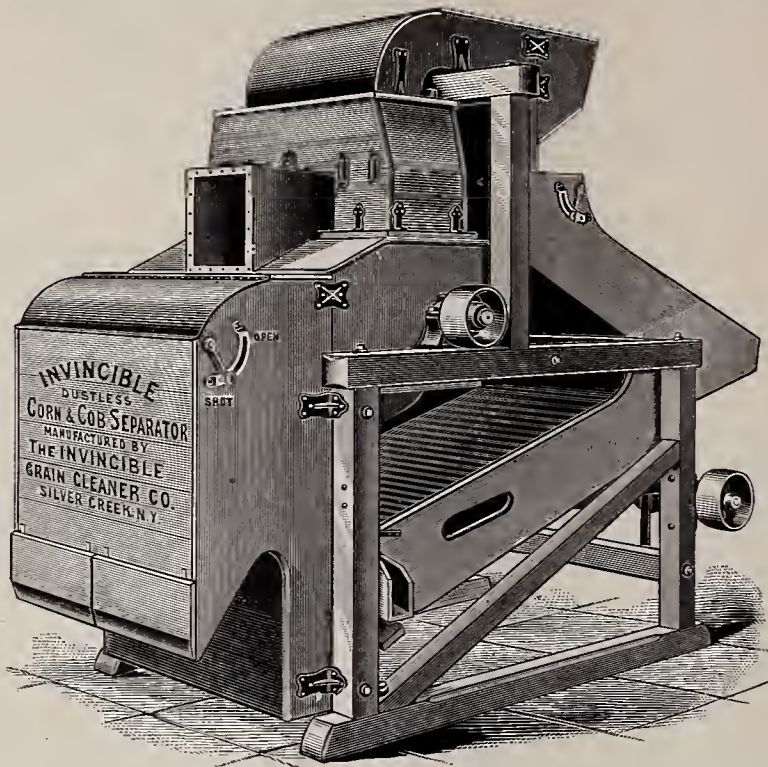
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CLEAN YOUR CORN

This Separator takes out cobs, silks and all foreign matter and gives a high grade of corn.

It is the most popular corn and cob separator on the market, the result of its extremely nice work. Order now.



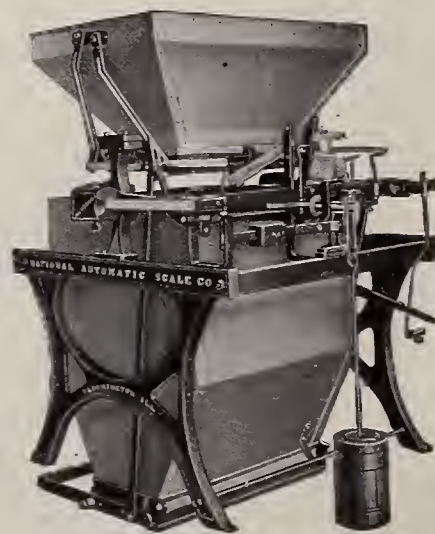
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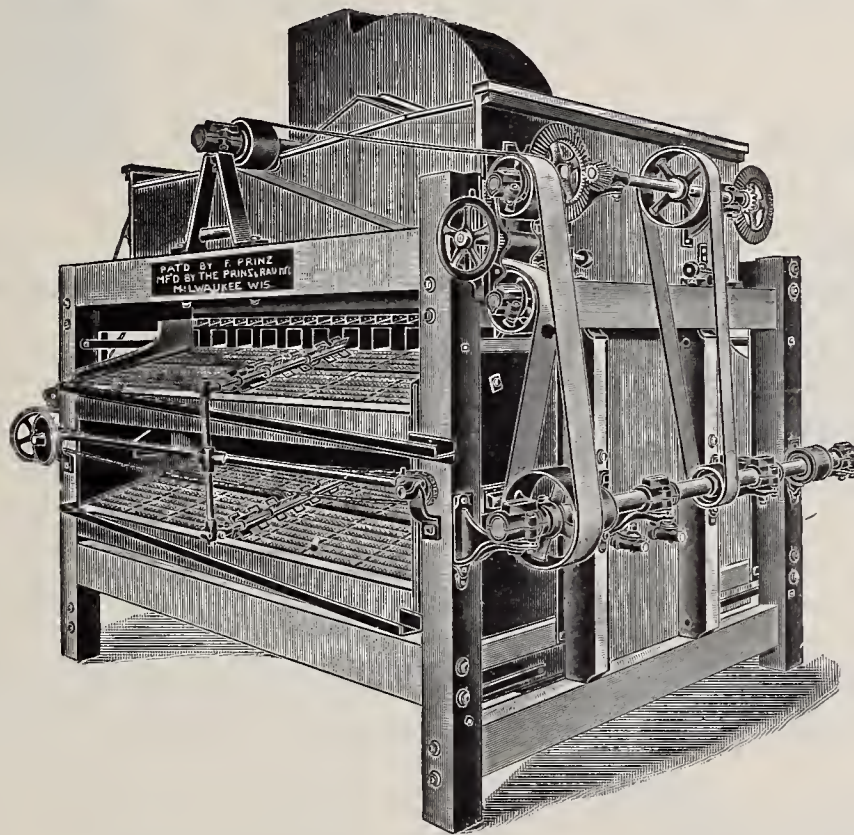
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PRINZ AUTOMATIC SEPARATORS



¶ They require no attention to produce perfect separations—they are automatic in every sense of the word.

¶ The SHEET STEEL SCREENS are practically indestructible and are supported by cross bars in such a way as to prevent sagging, thus allowing the TRAVELING SIEVE CLEANERS to come in contact with the entire screen surface.

¶ They have a PERFECT AUTOMATIC FEEDER, spreading the grain the full width of the sieve, with a large fan to insure perfect ventilation.

¶ Our TWO SIEVE, DOUBLE SHAKER Separator has two sides, independent of each other, so that, if desired, each side can have a different grade of grain.

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Rope Drives

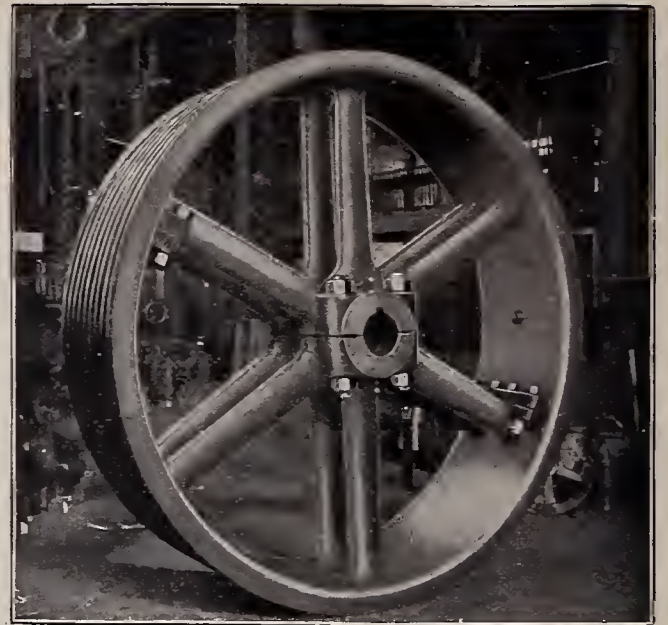
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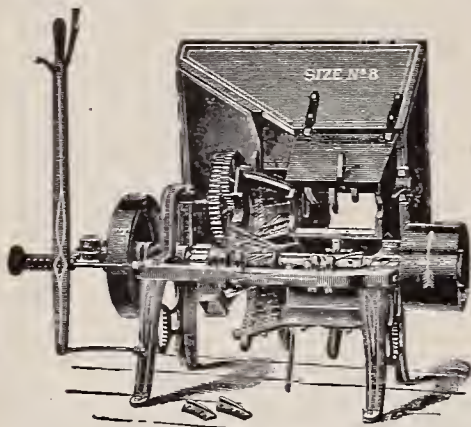
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NEW YORK, Fulton Bldg., Hudson Terminal, 50 Church Street



Send for Catalog No. 34.

Bowsher's All-Around Feed Mill



(Sold with or without sacking elevator)

It CRUSHES ear corn (with or without shucks) and GRINDS all kinds small grain and KAFFIR IN THE HEAD. Has CONICAL shaped GRINDERS, DIFFERENT FROM ALL OTHERS. RUNS LIGHT. Can run EMPTY WITHOUT INJURY. Ahead of rolls or stones in speed and quality of work.

YOU NEED a mill now. Quit THINKING about it. COMMENCE to investigate. Give US a chance and we'll tell you WHY we think ours is the best. SEVEN SIZES: 2 to 25 H. P. Circular sent for the asking.

Drive pulley overhung. Belt to it from any direction. Makes complete independent outfit.

THE N. P. BOWSHER CO., South Bend., Ind.

Did It Ever Occur to You

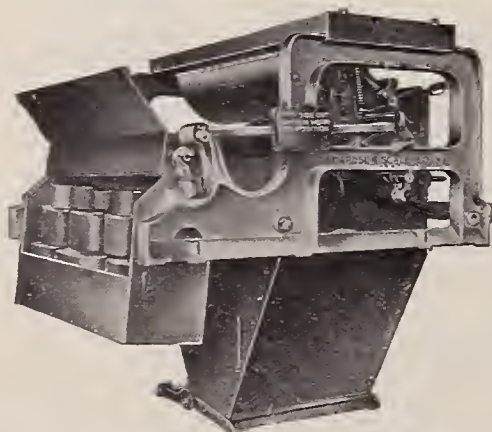
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Northwestern Agents for The Great Western Mfg. Co., Richardson Automatic Scales, Invincible Cleaners, Knickerbocker Dust Collectors

Richardson Improved Automatic Scale HAS NO EQUAL!

Call at our Exhibit at the National Corn Show and we will show you



Works out of Level—Is not affected by vibration, or dust, or rust

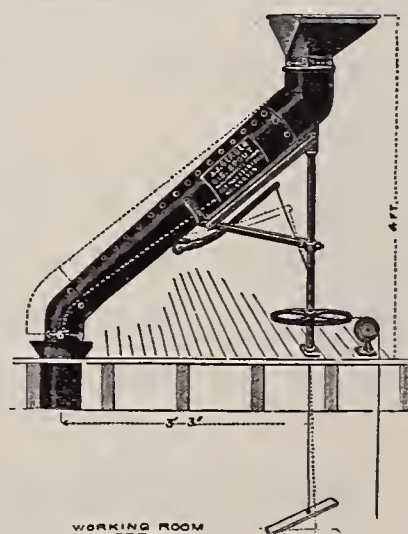
ITS SPECIAL FEATURES ARE:

1. It will swallow cobs in grain whole without stopping.
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4. Grain cannot run through unweighed because fitted with our interlocking gear.
5. It is built like the scale Uncle Sam uses to weigh his gold—the most sensitive on earth.

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Good Spouts Reasonable Prices

That is what you get when you buy the

Gerber Improved No. 2 Distributing Spout

Will prevent mixing of grain. Can be operated from working floor. I make a specialty of elevator and mill spouting. For particulars write

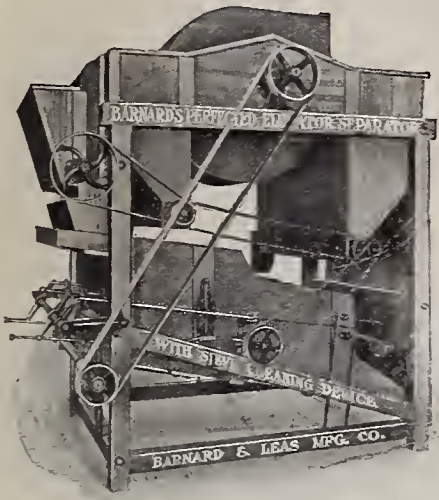
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Our Double Side Shake Elevator Separator will handle all kinds of grain and seeds. It is the latest development in Warehouse and Elevator Separators. Every feature of the machine is either improved over former machines or is entirely new.

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Our **Victor Corn Sheller** and other line of shellers and cleaners are too well known to need mention.

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Complete machinery equipments furnished for Grain Elevators, Malt Houses, Cereal, Feed, Flour and Cement Mills.

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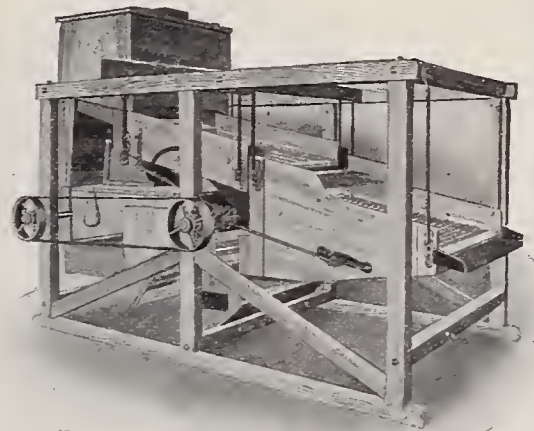
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for feeding elevator boots and shellers, any capacity, any distance, automatically. Handles all kinds of grain without waste or mixing.

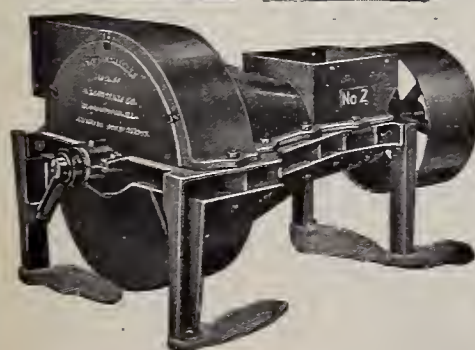
The ONLY WAY to feed a sheller.

THE U. S. CORN SHELLER

Patented Oct. 17, '05.

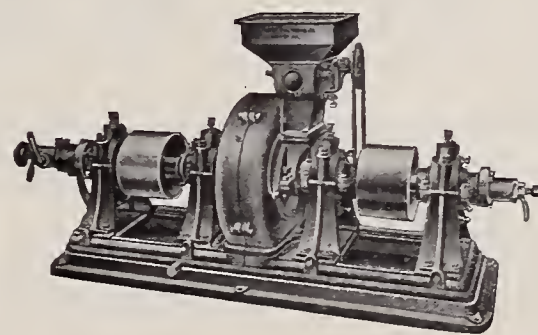
No pit or lower hopper. Cheapest installed. Quickest repaired. Our new Screw Adjustment can be used while sheller is full of corn and running. Shells clean, saves cobs. TRY IT.

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It is not the first cost of a mill that determines its value, but the interest it will pay on the investment.

The Monarch Attrition Mill

is constructed on strictly scientific principles, from the best of materials, and embodies the best workmanship obtainable. It will pay you to investigate it.

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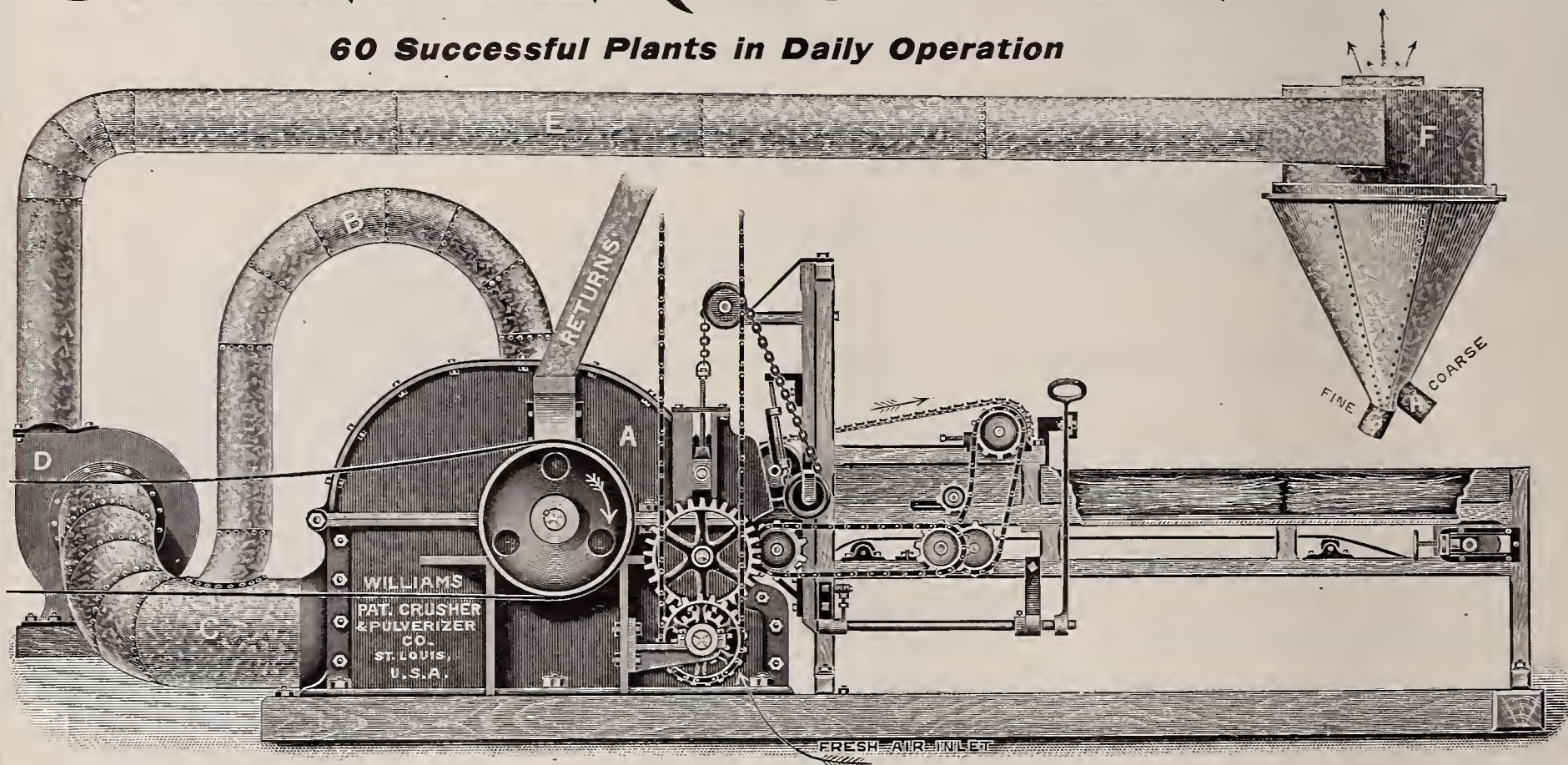
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WILLIAMS PATENT COMBINED HAY AND STRAW CUTTER SHREDDER AND GRINDER

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THE ONLY VERSATILE FEED GRINDER EVER PRODUCED

They will reduce EAR CORN with the HUSK on.
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They will reduce ALFALFA HAY and EAR CORN together.

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They will reduce ALFALFA HAY and FODDER OF ALL KINDS, with the CORN on.

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They will reduce ALFALFA HAY and two other kinds of CEREALS at the same time, as each machine has three separate feeding places.

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They will reduce ANY FORAGE material or CEREAL, together or separately.

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They are CUTTERS when desired, GRINDERS when desired and SHREDDERS when desired.

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They will reduce COARSE OR FINE by changing cages.

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They WILL GIVE DOUBLE THE CAPACITY FOR THE POWER EXPENDED AND COST FOR REPAIRS OF ANY KNOWN GRINDER ON EARTH.

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Write for BULLETIN No. 7

Write for Catalog of the Noxon

Automatic Hay, Meal and All Around Feeder

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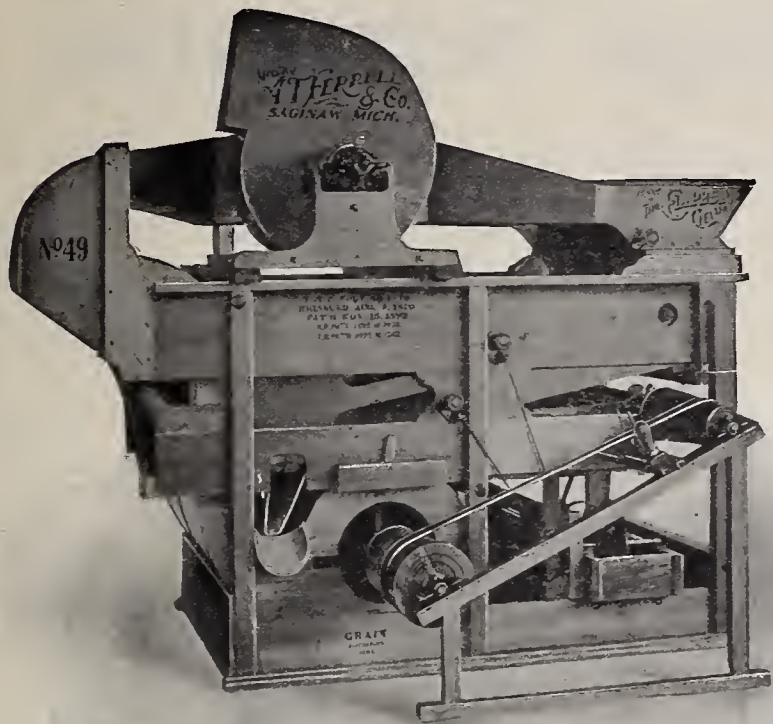
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THE WILLIAMS PATENT CRUSHER & PULVERIZER COMPANY
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Our traveling Brush device is the simplest, strongest and best made. Strong fibre brushes are made to travel back and forth across the under side of the screens, thoroughly brushing them and freeing the perforations from any grain or seed with which they may become clogged, making it impossible for the meshes to fill up.

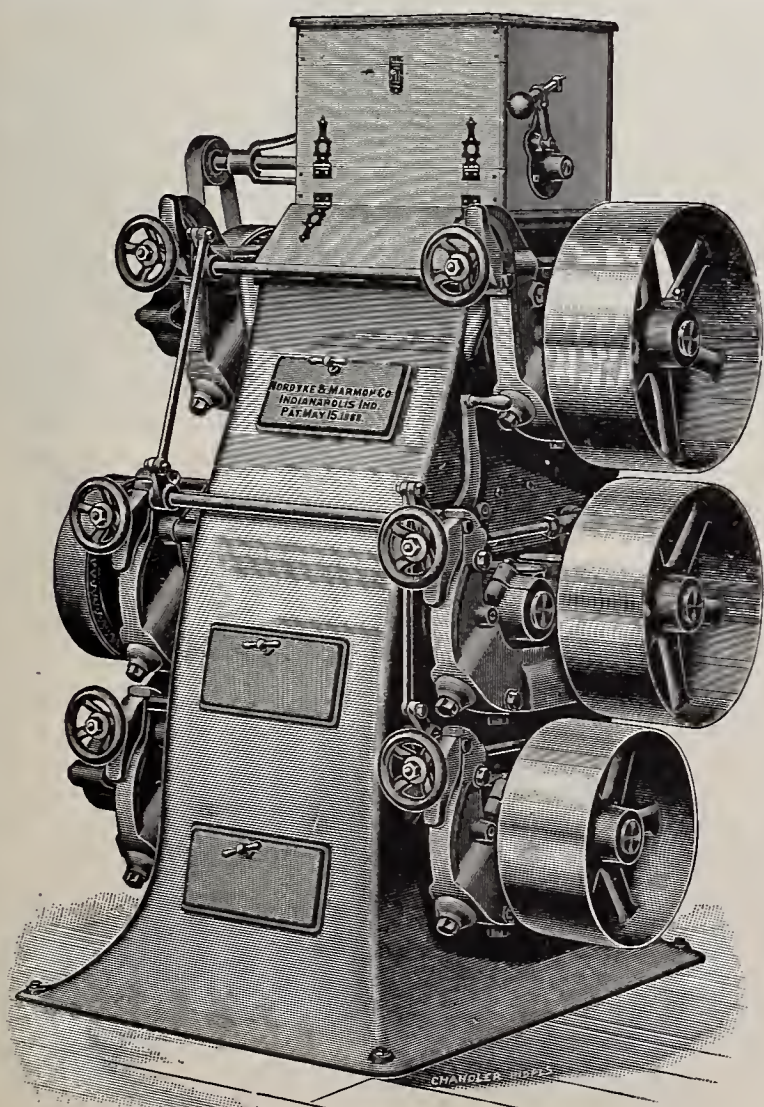
Any man who has used a Cleaner or Separator knows that the meshes or perforations in the lower screen soon become clogged so that it is necessary to "scrape" or "pound" the screen in order to clear the perforations. Our Traveling Brushes keep the screens clear all the time, and make the capacity and work of the machine uniform.

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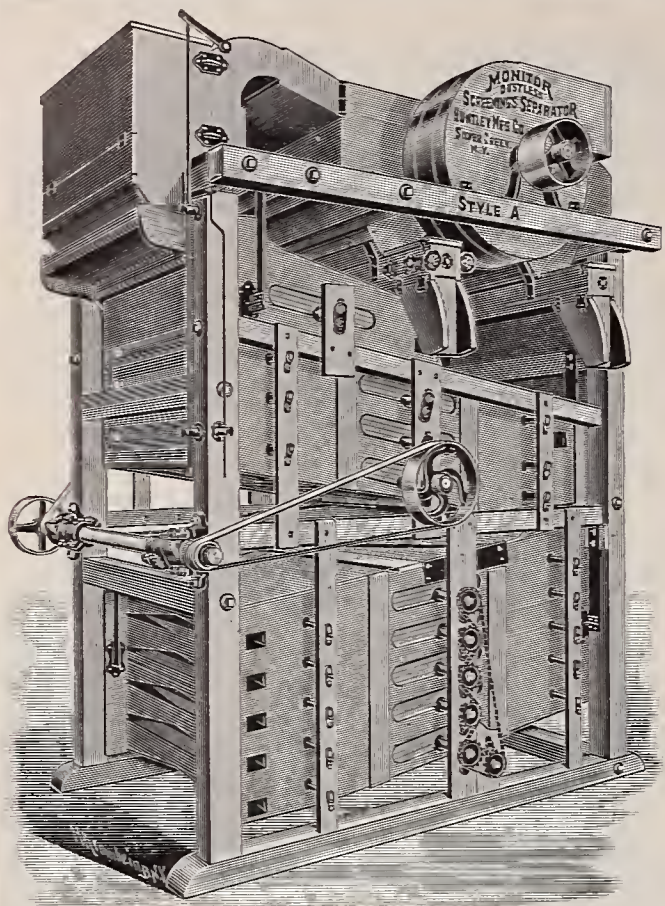
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America's Leading Flour Mill Builders

Established 1851

INDIANAPOLIS, IND.

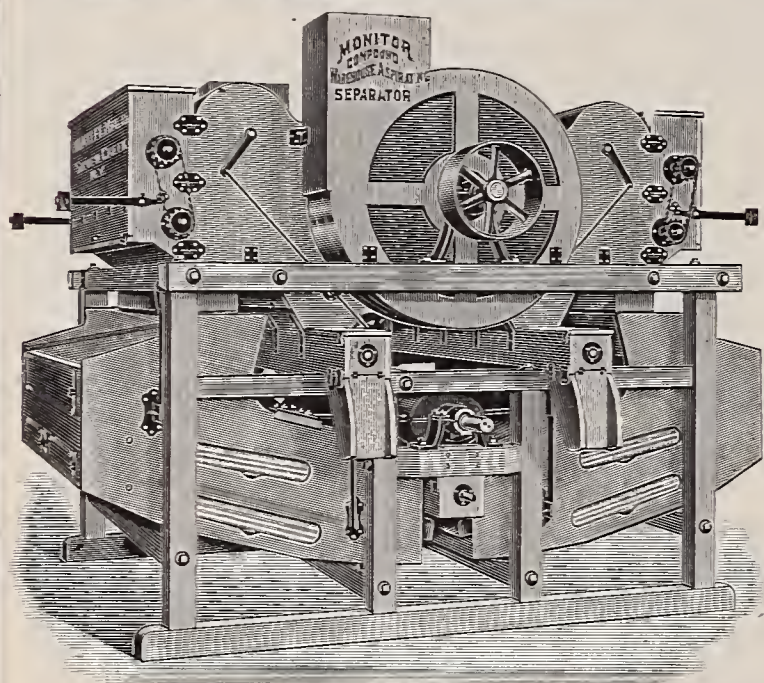


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Screenings Separator

Reclaim the good grain in your screenings and sweepings. Install one of these machines and place yourself in a position to get full market value for grain that you are at present satisfied to sell at a sacrifice.

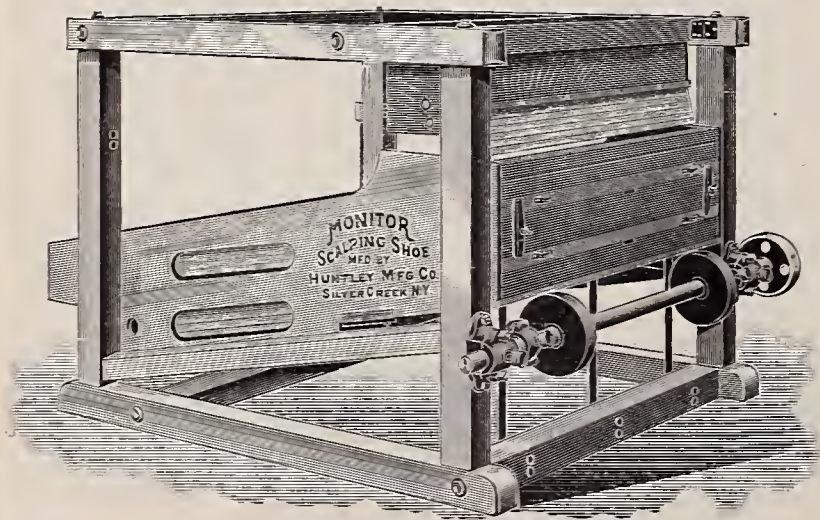
The most modern cleaning houses of recent construction are using the MONITOR. It represents an investment that will bring splendid returns—you cannot afford to do without it. A list of prominent users and detailed description of the advantages of this machine are yours for the asking.



MONITOR

Aspirating Separator

With capacities ranging from 1000 to 7000 bushels per hour, this machine has many decided advantages that appeal to the elevator operator looking for a cleaner with large capacity and possessing good cleaning ability in both air and screen work. This machine will handle more grain, with less power, space, care and attention than any machine manufactured. Many well known Monitor patent-protected improvements are embodied in this machine. Let us post you on "improvements worth while," we can interest you.



MONITOR

Scalping Shoe

Designed for use as a receiving or scalping cleaner, without air separations, this machine will perform a large amount of work with very little power. Traveling brushes can be placed under either or both screens, if desired. Shoe is supported in heavy frame. Feed hopper has vibrating feeder. These are built in three styles with capacities from 100 to 4000 bushels per hour.

Huntley Manufacturing Co., Silver Creek, N. Y.

Chicago, Ill., 608 Traders Building, F. M. Smith
 St. Louis, Mo., 25 Merchants Exchange, S. J. McTiernan
 Kansas City, Mo., 10 Board of Trade, H. C. Draver
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The American Elevator and Grain Trade

A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

VOL. XXVIII.

CHICAGO, ILLINOIS, DECEMBER 15, 1909.

No. 6.

A NEW BUFFALO ELEVATOR.

The grain storage capacity of Buffalo was increased by three quarters of a million bushels with the completion, in November last, of Elevator "C" of the Washburn-Crosby Company by James Stewart & Co. of Chicago. The elevator consists of a series of concrete storage tanks, a steel-frame tower and cupola covered with 1½-in. ferro-inclave plastered wall.

The storage tanks and tower which cover a ground space 203x65 feet, rest on piles about 40 feet in length. There are 12 tanks arranged in two rows of six each so as to form five interstice bins, also used for storage. The tanks are 31 feet inside diameter and rise to a height of 107 feet above the foundation.

Grain is received at the old Frontier Elevator and carried forward by means of a 36-inch belt con-

veyors are provided in the basement, either of which can discharge to the loftier leg or into the rehandling leg, which is provided with one row of 20 x 7 x 7 buckets.

All of the power transmission machinery was furnished by the Stephens-Adamson Manufacturing Company of Aurora, Ill. The complete spouting system, including castings and elevator legs, was supplied by the Webster Manufacturing Company of Chicago. Power is distributed by means of electric motors of Wagner Electric Company make, St. Louis.

NORFOLK EMBARGO LIFTED.

The London Corn Exchange has at last agreed to lift the embargo heretofore for several years existing against grain shipped on "certificate final" terms out of Norfolk, Va., and information has been

[For the "American Elevator and Grain Trade."]

RECONSIGNMENT CHARGES.

BY J. L. ROSENBERGER,
Member of the Cook County Bar.

The Supreme Court of the United States says that the case of Southern Railway Co. vs. St. Louis Hay and Grain Company, 29 Supreme Court Reporter, 678, was brought by the Hay and Grain Company on an award of the Interstate Commerce Commission. In a general way, the facts were as follows:

The Hay and Grain Company operates two warehouses in East St. Louis. The Company buys some hay at its warehouses, brought in from the adjacent country, but a large portion of it is bought at points to the north and west. Some of the hay thus purchased is sent directly through East St. Louis in the cars in which it was originally loaded, but much



THE WASHBURN-CROSBY COMPANY'S ELEVATOR "C" AT BUFFALO, N. Y.
James Stewart & Co., Designers and Engineers.

veyor through a gallery on the ground level for a distance of 125 feet to Elevator "C," where it falls into the boot of the loftier-leg. Then it is carried to the cupola by means of two rows of 15 x 7 x 7-in. buckets. On being elevated it is discharged into a 200-bushel hopper and then weighed in a 100-bushel Richardson Automatic Scale. The scale discharges the grain into a 450-bushel garner which in turn feeds a No. 34 Prinz & Rau Receiving Separator with a fan made especially for extreme high capacity.

The garner being provided with a duplex slide may discharge directly upon either of two 36-inch belt conveyors so arranged that they may spout into any bin or interstice bin. The cleaner likewise discharges upon either of these two belts.

The two belt conveyors, besides discharging to bins, also discharge into a 36-inch belt conveyor which will carry the grain to Mill "B" through a gallery 100 feet long, or beyond to Mill "A," a distance of about 250 feet.

For rehandling purposes two 36-inch belt con-

veyors are provided in the basement, either of which can discharge to the loftier leg or into the rehandling leg, which is provided with one row of 20 x 7 x 7 buckets.

All of the power transmission machinery was furnished by the Stephens-Adamson Manufacturing Company of Aurora, Ill. The complete spouting system, including castings and elevator legs, was supplied by the Webster Manufacturing Company of Chicago. Power is distributed by means of electric motors of Wagner Electric Company make, St. Louis.

The embargo was the result of the "heating" of several cargoes of grain which had been inspected at Norfolk. The foreign interests decided that the inspection there was not fully up to the standard, and consequently barred grain shipped from that port. The action of the Corn Exchange sets aside the discrimination for the future.

Natal in October exported 7,474 tons of corn, making 55,933 tons sent out since July 1, 1909. The distribution of the October exports was as follows: United Kingdom, 2,237 tons; Germany, 3,312; Belgium, 1,605; Cape Colony, 320.

of it is taken to its warehouses, where it is unloaded, inspected, and reloaded for the Southern markets. This is called a reconsignment. Taking these cars which are to be reconsigned to the Hay and Grain Company's warehouses and taking the reloaded cars therefrom involves the use of the cars for a long time, and there is some expense in hauling the cars. For this the Railway Company had been in the habit of charging \$4 or \$5 a car, equivalent, on the average loading, to two cents per hundred pounds. On an application by the Hay and Grain Company to the Interstate Commerce Commission it was held, on May 15, 1905 (11 Inter. Com. Rep. 90), that such charge was an excessive and unreasonable charge, and that one-half thereof was sufficient. Upon that basis it awarded to the Hay and Grain Company the sum of \$1,572.08, or one-half the sum paid theretofore by it to the Railway Company.

The judgment of the courts for said sum, interest, and \$350 attorney's fee in favor of the Hay and Grain Company is reversed by the Supreme Court

with instructions to send the matter back to the Commerce Commission for further investigation and report.

It appeared, the Court say, that the Commission was of the opinion that the shipper could not demand, as a matter of right, the stopping of the hay for the purposes of treatment or reconsignment unless the same privilege was given to other shippers; and that, in granting this privilege, the Railway Company could charge the shipper the actual cost only. But this privilege involved to the Railway Company the cost of hauling to and from the warehouses and the use of the car for some hours, perhaps days. The Commission found that \$2 or \$2.50 per car, or approximately one cent per hundred pounds, was the actual cost to the Railway Company.

But the Court is unable to concur with the Commission. If the stopping for inspection and reloading is of some benefit to the shipper and involves some service by and expense to the Railway Company, the Court does not think that the latter is limited to the actual cost of that privilege. It is justified in receiving some compensation in addition thereto. A carrier may be under no obligations to furnish sleeping or other accommodations to its passengers, but, if it does so, it is not limited in its charges to the mere cost, but may rightfully make a reasonable profit out of that which it does furnish. Especially is this true when, as here, the privilege is in no sense a part of the transportation but is outside thereof. Whether the conclusion of the Commission, that the carrier is under no obligations to permit the interruption of the transit, is right, and whether it is or is not under such obligation, it is entitled to receive some compensation beyond the mere cost for that which it does.

In another case between the same plaintiff and other railroad companies, involving the charges in a case of reconsignment of hay, decided on December 20 of the same year (*St. Louis Hay and Grain Co. vs. I. C. Ry. Co.*, 11 Inters. Com. Rep. 486), the Commission made an order dismissing the complaint. It was true the facts were not precisely like those in this case, but, at the same time, the difference in the conclusions of the Commission was such as seems to suggest that, perhaps, on further examination, the Commission had come to a different conclusion.

NATIONAL GRADES ADOPTED.

The Railroad and Warehouse Commission of Missouri in a half-hour session at Kansas City formally adopted for use in that state the grades of grain as adopted by the Grain Dealers' National Association at Indianapolis, in October, 1909; and they will be put into effect immediately.

For local use the Commission added three grades of "St. Charles White Corn." The principal effect of the new grading will be the establishment of a new grade for Pacific wheat. This wheat, which is now graded with red winter wheat, will be placed in a separate class. Wheat weighing 58 pounds to the bushel will be classed as No. 2 red. The minimum weight now is 59 pounds. The new grading also admits of 5 per cent white wheat mixed with No. 2 red, where none is now allowed. There are a few minor changes in one or two other grades.

The meeting was held at the Baltimore, and was presided over by Chairman Knott of the Commission. Besides representatives of the Kansas City Board of Trade and of Kansas City Mills, there were present: M. C. Fears, deputy chief inspector, St. Louis; J. L. Wright, R. P. Annan, T. P. Morton, S. S. Whitehead, grain committee of the Merchants' Exchange, St. Louis; J. O. Winn, supervising inspector, St. Joseph; R. R. Clark, T. P. Gordon, Alfred Muench, grain committee of the St. Joseph Board of Trade.

It is believed the Kansas Grain Grades Commission will take the same action in August next when by law the Commission meets to fix grades for the year.

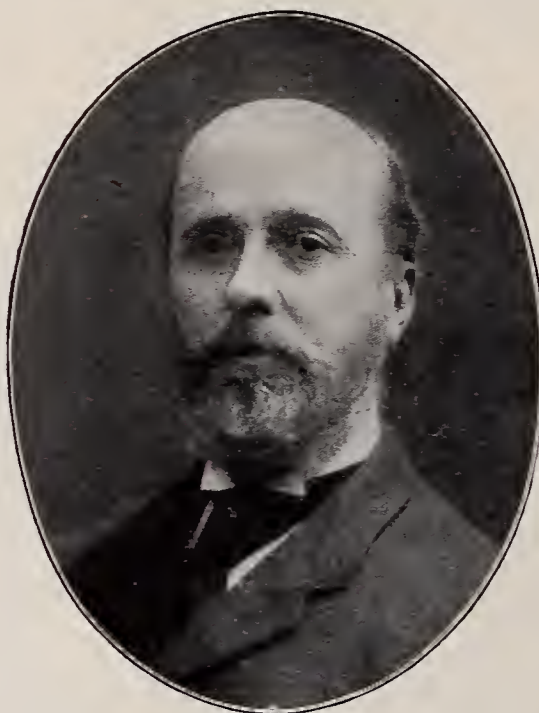
Two samples of South African corn were received by the Corn Products Company at Chicago on No-

vember 16. One sample of this corn was precisely like the American white corn, while the other sample was of Dutch corn from Tongoland, and was much like the Argentine grain in size, although softer.

WELDING RING.

There is no American that does not take a patriotic pride in the great commercial city of New York, which, for a century has been and probably ever will be the chief entrepot of American foreign trade, at least until the immensity of the trade and the consequent congestion of the harbor makes further growth impossible, if such a thing can be conceived as within the range of human things. It is true the relative supremacy of New York harbor over all the country combined as an export for grain has come to an end, for reasons that are variously explained, never entirely satisfactorily to every one interested in the trade in or out of New York, but absolutely New York is still "far and away" the greatest out-port for the grain of the country, except that in 1907-08 (crop of 1907) Baltimore led in exports of corn (14,688,762 bu. against 10,829,333 bu. for New York out of a grand total of 52,445,800 bus. for the nation).

The idea, then, that New York and the Produce



WELDING RING.

Exchange are among the "has-beens" in grain, which some seem to harbor, is quite erroneous. The export trade is still a large business; and there is also the local trade, enormous in itself, when one considers New York as a consumer alone aside and apart from the distributing trade carried on. This great trade finds its home in the New York Produce Exchange, which, as Western men think, sometimes, has become less provincial and much more sociable of late years than her receivers were in the days when the then New York merchant hardly considered it dignified to solicit business west of the Hudson. New York grain men now-a-days come West and meet their trade and the West likes them as good fellows, gentlemen, good merchants and level headed business men.

It is an honor, therefore, that Mr. Welding Ring enjoys to be president of the New York Produce Exchange, and more, it is a sign of the Exchange's appreciation of his executive ability, as well as of himself personally, that he is now serving his second term in that office.

Mr. Ring is connected with the house of Mailler & Quereau, shipping and commission merchants, both export and import. Their business is worldwide, but they are especially identified with the trade of Australia, Africa and the Far East, the firm having offices at Sidney, Melbourne and Perth. Mr. Ring is a native New Yorker, of Quaker parentage, his birthplace being Cornwall, Orange County. He was educated at Westtown Seminary in Pennsylvania.

For two years after entering upon his business

career, Mr. Ring was connected with the old Corn Exchange as salesman for a large grain and flour house, but since then he has been engaged in the foreign trade and in that capacity has traveled extensively in Europe, India, China and Japan as well as in the United States.

Mr. Ring is a member of the New York Chamber of Commerce and of the New York Maritime Exchange, in both of which important bodies he takes an active and influential interest.

[For the "American Elevator and Grain Trade."]

NAPOLEON'S CRITICISM OF THE CHAMBER OF COMMERCE OF PARIS.

BY L. C. BREED.

Interest in the man who was, in his day, the foremost character in the world is still very general. It always has been so, and doubtless will continue long to be the case, since he set in motion new ideas which are still potential. One of the remarkable phases of Napoleon is the practical side of his character. He always had a plan and he proceeded to carry it out. If argument did not clear the way, then the obstruction was met with physical force.

The communication below, written one hundred years ago, sounds as modern as if penned yesterday. It also shows the existence at that time in Paris, of an organization similar in purpose to such as are known to us. And furthermore, like all of his correspondence, there is directness, clearness and force displayed in this letter, making it a good model of diction for all young business men to imitate. Napoleon wrote:

28th July, 1809.

"Comte Fouché:—I have received a farrago which you have sent me, on the subject of the grain trade, and which is perfectly ridiculous. I do not know why you begin there. I wonder you did not begin by teaching me the alphabet. It is mere political economists' chatter. Who is there in France who objects to the grain trade? Who opposes exportation? Not the law of the country. It is the English who prevent neutral nations from entering our ports and carrying off our vessels (sic). These arguments are pitiful in themselves, but they have one great drawback—that of encouraging the commercial community to lecture the government, to open discussions, and disturb men's minds. The administration has nothing to do with political economy. The principle of the grain trade is unvarying. Exportation begins as soon as there are outlets. There is no exportation without foreign trade. This channel for trade is blocked by England. I have endeavored to replace it by licenses (bounties), and if these are used, the evil may be remedied.

"As far as I am concerned, I request you will not send me such idle tales: I have no need of the twaddle, nor the advice of M. Dupont de Nemours, and a few merchants.

"I have read the letter from the Chamber of Commerce. You did wrong to receive it, and I regret to see the direction you are giving to the internal government of the country.

"We do not need any advice from the Chamber of Commerce; and if we did, it would not be M. de Nemours who should bestow it. Some conversation with certain well-informed merchants may be useful, but the deliberations of the Chamber are invariably valueless and have certain serious drawbacks. The Chamber of Commerce must be very ignorant indeed if it is unaware (1st) that the Americans have not raised their embargo for France; (2nd) that I have never objected to the Americans entering my ports. It is the English who have objected to that. The embargo has been raised for Holland. The King thought it his duty to accept it. I have ceased to allow the introduction of Dutch merchandise into France, and I have called upon him to revoke the step he has taken, as I desire France and Holland shall act on the same principle. And certainly, if England is willing to allow American vessels to come to France, I shall be the first to approve her action. The Chamber of Commerce knows nothing at all, and only chatters theories. I beg you will not expose me to the annoyance of receiving such memoirs. I see you have no experience whatever of internal government. We do not require any fresh legislation on matters of trade. France is suffering greatly, I know, not on account of legislation but on account of the English blockade. This is because the Danish, Russian, and Prussian flags, being those of England's enemy, cannot move about, and because the Americans have laid an embargo on their own ports, and after that have proceeded to publish an act of impeachment.

"There is no outlet. I have endeavored to supply it by patents, or licenses. Let me know the effect of these measures, and do not disturb the commercial mind by foolish and unseasonable discussions. There will be a world of chatter, and nothing worth saying will be said. They have not even the most elementary notion of the question."

COUNCIL OF GRAIN EXCHANGE.

The Council of Grain Exchanges of North America has been organized, officers elected to serve until a regular meeting to be held in February, 1910, which will thereafter be known as the "first annual meeting," and a number of exchanges have already signified by the formal action of their members that

over matters of material interest and concern to all of the exchanges.

Not being himself directly engaged in the grain trade Mr. Bunnell had no suggestions to make as to the form of such an association, which he said grain men were better prepared to discuss than he, nor would he consent for the same reason to act as chairman, although pressed by the entire body present to act.

Therefore, it being observed that as St. Louis had inaugurated this movement it would be appropriate for that city's representative to preside, Edward M. Flesh was made chairman pro tem. and J. C. Murray of Chicago secretary.

Before proceeding to formal business, Sec'y Murray read letters of regret and greeting from Wichita and Winnipeg, both of which exchanges expressed sympathy with and interest in the proposed organization.

The Chair then called on Mr. S. P. Arnot of Chicago, a gentleman who had given the subject much thought, to outline his or, if it might be so called, Chicago's plan. Mr. Arnot said he had worked with the local committee prior to the September conference, and they had come to the conclusion that it would be wise to organize a federation of the exchanges. As to the form, Chicago had no desire to dictate in anything. No plan, therefore, has been prepared here, but Chicago hopes something tangible and permanent will come out of this meeting and make the enthusiasm of the September meeting concrete. No central organization of the exchanges can bind the separate bodies—their differing rules will prevent that; so that only an affiliation for the consideration of common questions is possible, the conclusions reached being recommended to the several exchanges for their individual subsequent action thereon.

As some delegates present wished to at once take up for discussion and recommendatory action certain common matters, Mr. Arnot added that generally speaking the local committee and he himself did not think it wise to do so at this time, when the time would be fully occupied by the preliminaries of a permanent organization.

E. P. Peck of Omaha said Mr. Arnot had expressed his ideas quite accurately.

Frank I. King thought something more might be done at once than merely organize.

J. R. Marfield said Minneapolis is ready to co-operate.

Charles Kennedy of Buffalo said he would regret going home without doing anything save organizing.

John M. Dennis thought Chicago was right in believing that nothing could be done by an organization save to recommend action to the various exchanges.

Mr. Goemann of Toledo wanted to organize and do more also—take up some of the test subjects, discuss them and recommend action on them to the exchanges represented. This led naturally to the discussion of the subject Mr. Goemann has recently made a lively one in the trade, to-wit, the calling of margins on transactions in cash grain for future delivery. There was a distinct difference of opinion on the merits of the proposition. Mr. Dennis thought the calling of margins from country shippers would drive them into "the pit" which is already overcrowded. As for himself he could not conceive of his calling on a man worth considerably more than himself for margins. He thought the losses by defaults that Mr. Goemann complains of are on the whole insignificant.

Boiled down to a sentence, the discussion amounted to this: Calling margins would be nice, but how are you going to do it in daily practice?

Meantime a committee composed of Chas. England of Baltimore, Chas. Kennedy of Buffalo, E. P. Peck of Omaha, E. J. Furlong of Milwaukee, Ernst Pfarrius of New York, W. M. Richardson of Philadelphia, A. G. Tyng of Peoria, and S. P. Arnot of Chicago, who had been appointed a committee to propose a plan of temporary organization, had met and now reported the following:

The association shall be known as the "Council of North American Grain Exchanges."

The Council shall consist of two delegates from each Exchange represented, to serve for the period of one year, or until their successors are appointed.

The officers shall be a president, three vice-presidents, and a treasurer. The secretary shall be appointed by the president, subject to the approval of the executive committee.

The executive committee shall consist of seven, including the president.

All the officers and the executive committee shall be elected by the council.

This committee recommends that committees be appointed by the incoming president to accord with the constitution and by-laws to be hereafter prepared and adopted by the Council.

We recommend that the annual meeting be held in Chicago on the first Monday in February; and that subsequent meetings shall be held at such time and place as the executive committee may determine.

We recommend that the officers, as above, be elected at the present meeting to serve until the annual meeting, to be held the first Monday in February, 1910.

We recommend that the executive committee be instructed to prepare a preamble and by-laws to be submitted for adoption at the first annual meeting to be held the first Monday in February, 1910.

The report was unanimously adopted. Officers were then elected as follows, to serve until the meeting of February, 1910, or until their successors shall be elected:

S. P. Arnot, Chicago, president.

J. R. Marfield of Minneapolis, Frank I. King of Toledo, and Chas. Kennedy of Buffalo, vice-presidents.

Wm. M. Richardson of Philadelphia, treasurer.

The executive committee was by order selected by a committee consisting of Messrs. Kennedy, King and J. L. Messmore of St. Louis, as follows: Ernst Pfarrius of New York, S. H. Jones of Duluth, Chas. England of Baltimore, F. G. Crowell of Kansas City, N. L. Moffit of St. Louis, Chas. D. Jones of Nashville, and the president *ex-officio*.



S. P. ARNOT,
President of the Council of Exchanges.

they are prepared to become active members of the Council.

In pursuance of a call issued by President Bunnell of the Chicago Board of Trade, as directed by the preliminary conference at the Princess Theatre on September 17, the following named exchanges were represented by the persons named at a meeting held in Chicago on November 15, in the directors' room of the Board of Trade:

Baltimore Chamber of Commerce: Chas. England, Geo. S. Jackson, John M. Dennis.

Buffalo Corn Exchange: Chas. Kennedy, L. S. Churchill.

Detroit Board of Trade: Arthur S. Dumont.

Duluth Board of Trade: Stephen H. Jones, C. F. Macdonald, G. G. Barnum, Ward Ames, W. C. Poehler.

Indianapolis Board of Trade: Bert A. Boyd.

Kansas City Board of Trade: C. W. Lonsdale, Geo. H. Davis.

Louisville Board of Trade: Thos. G. Williams, R. L. Callahan.

Milwaukee Chamber of Commerce: E. J. Furlong, Clark Fagg.

Minneapolis Chamber of Commerce: J. R. Marfield, John G. McHugh.

Memphis Merchants' Exchange: V. L. Rogers, S. M. Bray, S. T. Pease.

New York Produce Exchange: Frank I. Maguire, Ernst Pfarrius.

Omaha Grain Exchange: E. P. Peck, John R. Morris.

Peoria Board of Trade: C. C. Miles, A. G. Tyng.

Richmond Grain Exchange: John R. Cary.

St. Louis Merchants' Exchange: Edward M. Flesh, John L. Messmore, Nat L. Moffitt.

Toledo Produce Exchange: Frank I. King, F. O. Paddock, H. L. Goemann, E. L. Camp.

Philadelphia Commercial Exchange: W. M. Richardson, E. E. Delp.

Pittsburg Grain & Flour Exchange: J. A. A. Geidel.

President Bunnell called the meeting to order, stating briefly its object, which was to consider the question of organizing a central body to be representative of the grain exchanges of the United States and Canada, that should have jurisdiction



J. C. MURRAY,
Secretary pro tem. of the Council of Exchanges.

The following resolution was presented by Mr. Goemann:

Whereas, The grain exchanges of America sustain a vital relation to our common commercial welfare, and,

Whereas, There is a growing tendency to manipulation in the conduct of business transacted on such exchanges, and,

Whereas, Such manipulation is detrimental to the important interests involved and is directly subversive of the objects for which these exchanges were organized;

Resolved, That the representatives of the various exchanges of North America, here assembled this 15th day of November, hereby commend the action of the directors of the Chicago Board of Trade in proposing such amendments to its rules as are designed to thoroughly eliminate any manipulation of market values as a basis of extorting unreasonable and unjust damages.

After discussion of the resolution and the proposed amendment referred to, the former was

unanimously adopted, whereupon after some informal talk, the Council adjourned.

At 6 o'clock the delegates as guests of the Chicago Board of Trade met at the German Room of the Grand Pacific Hotel, where dinner was served.

After the cigars were passed the gathering developed a general "good of the order" talk which was most interesting, pleasing and valuable. It covered quite a range of topics but all cognate to the grain business, its future growth and conduct; and served to rekindle and render more permanent the spirit of harmony and the desire for common accord on vital trade matters awakened at St. Louis in July and at Chicago in September.

A COMBINED MILL AND ELEVATOR.

The elevator shown in our illustration is a combination house for small grain and ear corn, together with a 25-barrel Nordyke & Marmon flour

CYRUS HALL McCORMICK.*

Some time in the year 1809 (neither the day nor the month appears in our biography) there was born in Rockbridge County, Virginia, a male child, who was named Cyrus Hall McCormick. His parentage was of the famous Scotch-Irish stock, than which perhaps there was no more vigorous race of men and women in all America. The boy's environment in 1809 was somewhat remote from the centers of American civilization and learning of the days, but his father, Robert McCormick, was a bookish man, the owner of 1,800 acres of land, two grist mills, saw mills, distillery, smelting furnace, and other properties and industries, and the son received the education of his contemporaries. Robert McCormick was an artisan also, as were many land owners of his time—makers of their own tools, shoes, clothing, carpets, provisions, etc. Further, he was an inventor, in whose blacksmith shop he

reducing the amount of manual labor one must do to eat only and so raise laboring men from the status of "food for cannon" to the dignity of men. Perhaps this very period of turmoil in Europe, of which the year 1809 was near to the climax, had something to do with the ethical change that has come over the world since the fall of Napoleon. This year at least, was prolific of men of the new era:—Poe and Tennyson; Chopin and Mendelssohn; Lincoln and Gladstone; Hausseman and Proudhon; Lord Houghton and Mr. Darwin; Kinglake, Holmes, and last and by no means least—McCormick, whose work will stand alongside that of Lincoln as the salvation of the poor.

Father Robert McCormick was a thoughtful and resourceful man—an American, a Democrat, a man of the American people who then above all things were inventors, seekers of short-cuts to leisure, wealth, and ways to elevate the race by reducing the sum of that unalloyed manual labor that at all times and everywhere on the frontier made life in America so wearisome and so poor on its spiritual side; and Cyrus was raised in this atmosphere of progress. The father's inventive talent—he was not a genius—found its more than match in his conception of a reaper of grain. As early as 1816 he had tried one in the field and found it a failure—a fantastic machine pushed from behind by two horses and presenting to the standing grain a row of curved sickles fastened to upright posts, the grain being whirled against the sickles by revolving rods. In secret he persevered, but he never succeeded. Ultimately he abandoned his idea to his son, Cyrus H., who early in the summer of 1831 put a new reaper in the field on the home farm. That too, was thrown on the scrap heap as a failure. It cut the grain but it could not deliver it after it was cut. Before the harvest of that year was over, however, he had built a new machine, on the new principle of a reciprocating cutting blade,—a dividing knife with a back and forth motion,—which has since been used in every successful reaper and mower that has ever been made. The other details of fingers to hold the grain upright until cut, the reel, the platform, the subsequent delivering rake, binding device,—all were simple enough. This reaper, tried out in 1831, reaped. It did the work of six laborers with scythes and twenty-four men with sickles; and the Reaper was born to a waiting world.

Cyrus H. McCormick has often been accused, in court and out of court, of plagiarizing his reaper. He was not the first patentee of such a machine. His patent was in fact the forty-seventh out of more than 12,000 now on file in the patent office. Of the forty-six previous issues twenty-three were granted in Europe and twenty-three in the United States. Nevertheless the "McCormick" seems to have been the first reaper that would cut grain as it grew in the field and deliver it for binding into a sheaf. The groping of the forty-six seems to have been no help to McCormick, who found his way to success unaided and alone; and now that the "Harvester Trust" has eliminated competition for the priorities, the trade generally has conceded to Cyrus H. McCormick the right to the renown that is due the "Inventor of the Reaper."

McCormick was a business man as well as an inventor. He created the business of building reapers and then invented the credit system that enabled him to sell his machines to farmers who otherwise could not or would not have bought and used them. This last invention—a business method of merchandising reapers, getting them onto the farms "without money and without price" and then getting his pay for them after harvest, was really a greater feat even than inventing the machine itself; and to that system alone is directly due the fact that the McCormick Reaper did become the blessing it has been to the world, as the one machine that has cheapened human food all over the world and brought to mankind the leisure to lift itself above the sordid necessities of mere animal life to a broader existence on the earth.

The greater part of Mr. Casson's biography is of course devoted to Mr. McCormick as a business man—as the inventor and creator of the McCormick



WADE H. D. WARFIELD MILLING CO.'S ELEVATOR AT SYKESVILLE, MD.

mill, owned by the Wade H. D. Warfield Milling Co. at Sykesville, Md.

The elevator is 33x38 feet in size, and has a capacity of 15,000 bushels of small grain and 5,000 bushels of ear corn. The mill is 16x20 feet in size.

The elevator is of cribbed construction and stands on a stone foundation with a brick power house. The machinery equipment consists of a 300-bushel Fairbanks Scale, a burr mill, No. 7 Combination Monitor Cleaner, B. S. Constant Sheller with Chain Feeder, one stand of elevator legs, and one 25-horsepower Fairbanks Gasoline Engine.

The elevator was designed and built by the Burrell Engineering and Construction Co. of Chicago.

The common practice of a number of farmers' elevators in North Dakota to issue storage tickets as security for loans from commission houses at terminal points having been called to the attention of the attorney general by members of the North Dakota Railroad Commission, that official has ruled that the practice is not only illegal but criminal; and notice has been served on the offending parties.

worked out his ideas for the improvement of the farming machinery of his time. And among these was a reaping machine in embryo.

Just when, where and how originated that "difference between progression and stationary inaction" which differentiates the Oriental from the Occidental, or the savage from the civilized man, "is still one of the great secrets which science has yet to penetrate." Progress, as Walter Bagehot has said, is not really the "normal fact in human society"; it seems so to our habitual thought, but history in fact refutes it. Progress is modern and European; the ancients had and Asiatics have still little conception of it. Perhaps, as Bagehot supposes, we may trace progress to the cumulated influence of conflict; as stronger nations conquered the weaker, so the best characters tended to prevail over their fellows; and somewhere and somehow the warrior cult gave way to the inspiration of industry and social betterment—somewhere there was born the desire in man to conserve and elevate men by

*CYRUS HALL McCORMICK: His Life and Work. By Herbert N. Casson. Chicago: A. C. McClurg & Co. Cloth, 16 mo., pp. xii, 264.

business; and the pages devoted to this part of Mr. McCormick's career are the more interesting because Mr. McCormick never seems to have reduced himself to the low level of the mere money-maker who is so conspicuous a figure in the social and business life of today. His business was, indeed, the first of his concerns; every detail was under his eye; his patent rights were fought for in the courts; he bought and assimilated new ideas and new inventions that perfected his machine, and he pushed his sales far and wide; but he was not a "financier" as that word is today defined; and one can hardly avoid a greater degree of respect for him personally on that account.

After his business Mr. McCormick was most conspicuously before the world as a politician. He was a Jefferson Democrat from his boyhood in Virginia to the end, but never a pro-slavery man. His Presbyterianism made him a moralist in business and daily life and a conservative in politics. When he became rich he bought the *Interior* and made it a great religious newspaper. In 1860 he tried at the Baltimore convention to open the eyes of the Southern politicians to see the standpoint of the North; failing in which he bought the *Chicago Times* and for two years himself tried to explain to Chicago and the Northwest the standpoint of the South; and failed as he had done at Baltimore. The War over he accepted its results but continued to oppose the special privileges that he saw had entrenched themselves at Washington and in the laws during the progress of the War. "I have been throughout my life," he said, "opposed to all measures that tend to raise one class of the American people upon the ruins of others. The country is the common property of all and all are interested in its prosperity."

But it is for the Reaper, and that alone, that Cyrus Hall McCormick will be remembered by the world. The creative beneficence of that invention surpasses words to express. It has made food cheap—so cheap that the food the reaper has made plenty is the cheapest (and at this hour the only cheap) food the world has, and it has lightened the burden of human toil almost the world over—only where man is still oppressed by the "stationary inaction" of the Oriental and the savage is the "McCormick Reaper" unknown and he unhonored. That it has had no single rival as a benefaction to the world in the nineteenth or thus far in the twentieth century is probably true; nevertheless in his endeavor to emphasize that fact, best expressed in simple terms, Mr. Casson has been led in his final chapters into an accumulation of extravagances and surprising errors of fact that mars an otherwise readable narrative, although a somewhat insufficient one as a dignified and definitive biography.

WELLER MANUFACTURING COMPANY TO BUILD A NEW PLANT.

Only three years ago the Weller Manufacturing Company made an addition to their plant that increased their floor space at that time by thirty thousand square feet, which it was thought would give ample room for a number of years to come.

As an indication, however, of the rapid growth of the Weller Manufacturing Co.'s business, and the demand for "Weller Made" goods, this Company has recently purchased a tract of land containing eight acres, located on the Chicago, Milwaukee & St. Paul R. R. at 44th Avenue and Cortland Street, Chicago, where a new modern plant will be erected, having a capacity of treble the present one.

The property acquired is now vacant, and it is the intention to erect buildings to house their machine shop, sheet-metal, conveyor, bucket, wood working and foundry departments, that shall be of the most modern and approved type for that class of work. The buildings will be of steel construction throughout, and saw-tooth roof with the exception of the foundry. They will be equipped with the most modern labor-saving devices obtainable. The building for the storage of patterns will be fire-proof throughout. There will also be a modern office

building and the shipping room will be designed for quick and accurate handling of all orders. It is expected to have the plant ready for occupancy by May 1, 1910.

PRIZE CORN WINNER.

Fred C. Palin of Newtown, Ind., was the winner of the Kellogg Trophy at the National Corn Exposition at Omaha now in progress. Last year and in 1907 this prize was won by L. B. Clore of Indiana.

"I spent seven years producing that ear of corn," said Mr. Palin to the representative of the Indiana Farmer. "My parent stock consisted of Reid's Yellow Dent seed as the male plant and the mother plant was from the Alexander Gold Standard variety. The corn was planted two rows of Yellow Dent and then two rows of Gold Standard. The two rows of Standard were detasseled the first two years. This produced the seed from which the world's best ear of corn has been produced."

"My system of farming is to rotate wheat, oats and corn and I use some commercial fertilizer



FRED C. PALIN.

Farming 280 acres of land, the yield in the field from which this ear was selected, was about 90 bushels to the acre.

"The ear came from among those selected by my men for seed, and as soon as we examined it carefully, we decided it was a prize winner. The credit is due to my wife or hired men for selecting the ear. I don't take any credit for it."

According to L. B. Clore, superintendent of judges, the Palin ear is not only the best ear of corn this year, but it is a finer specimen than the famous Pascal ear which sold for \$550, two years ago.

"It is the best ear the world has ever produced," says Prof. G. I. Christie, of Purdue University, who was one of the judges. "It is all corn with very little cob. The kernels are three-fourths of an inch deep and in perfect rows. There is no way of telling its worth, no way of estimating the influence the seed from the ear will have on the corn crop of our state; and it is to be hoped some Indiana man will buy it."

Mr. Palin is a native of Indiana, having been born on a small farm in Fountain County, in 1863, the land being in a timbered and very wet section of country, where farming was a truly strenuous occupation. Mr. Palin lived on the farm with his parents until he was nineteen years of age, getting such a school education as the country afforded.

The farm being too small to maintain all the family of five children, of which he was the eldest, Mr. Palin drifted from one thing to another in a commercial and mercantile way until 1898.

"During all my various vocations," he wrote the "American Elevator and Grain Trade" in February last, "I was impressed with the fact that agriculture is the foundation and life of every other business in existence; that it is the master wheel; and as it slows down or gains momentum, so do all commercial or manufacturing enterprises. I realized that I was not cut out to accumulate much of the 'root of evil' in the business I was in; and, fortunately, in 1898 a better chance smiled upon me, and I was enabled to rent some farm land and borrow a team of horses and some implements, with which outfit I began farming. I subscribed for some agricultural papers and asked for all the experiment station bulletins I could get. The study and investigations I made in this way proved to be interesting, entertaining and beneficial, but not to the degree I wished; hence I started to school, and became one of the farmers' short-course students."

"While I am only as yet what should be called a 'primary,' I feel that I have made no mistake in following up the instructions that have come from experimental investigations. I am greatly in favor of general agriculture and soil improvement being taught in every public school in the land. Why not have 'book farmers' as well as book doctors, book lawyers, or preachers?"

In 1908 Mr. Palin was appointed one of the instructors in the corn class of the Farmers' Short Course at Purdue, and was reappointed to serve in the same capacity during the same course in 1909 meeting on January 11-18, 1909. Governor Hanly gave him the appointment of county special also, in the interest of the National Corn Exposition of this year, and he had the appointment to be one of the judges also at the same Exposition.

Mr. Palin is still farming the same land on which he began farming in 1898, but not with borrowed horses and implements. While he is a tenant, he is the owner of all the horses and up-to-date machinery to run 280 acres of land and half-partner with the landlord in all the grain, cattle and hogs. They aim to keep enough cattle and hogs to consume all the corn and grasses produced on the farm, which means about forty head of cattle and 300 head of hogs annually.

CHINESE CORN.

The Division of Publications of the Department of Agriculture has told in a leaflet circular its experience with a "new kind of corn from China," as follows:

"A small lot of shelled corn, of a kind that is new to this country, was sent to the U. S. Department of Agriculture from Shanghai, China, in 1908, and tested the same season. It proved to have qualities that may make it valuable in breeding a corn adapted to the hot and dry conditions of the Southwest. The plants raised in the test averaged less than 6 feet in height, with an average of 12 green leaves at the time of tasseling. The ears averaged 5½ inches in length and 4½ inches in greatest circumference, with 16 to 18 rows of small grains. On the upper part of the plant the leaves are all on one side of the stalk, instead of being arranged in two rows on opposite sides. Besides this, the upper leaves stand erect, instead of drooping, and the tips of the leaves are therefore above the top of the tassel. The silks of the ear are produced at the point where the leaf blade is joined to the leaf sheath, and they appear before there is any sign of an ear except a slight swelling."

"This corn is very different from any that is now produced in America. Its peculiar value is that the erect arrangement of the leaves on one side of the stalk and the appearance of the silks in the angle where the leaf blade joins the sheath offer a protected place in which pollen can settle and fertilize the silks before the latter are ever exposed to the air. This is an excellent arrangement for preventing the drying out of the silks before pollination. While this corn may be of little value itself, it is likely that, by cross-breeding, these desirable qualities can be imparted to a larger corn, which will thus be better adapted to the Southwest."

"The discovery of this peculiar corn in China suggests anew the idea that, although America is the original home of corn, yet it may by some means

have been taken to the Eastern Hemisphere long before the discovery of America by Columbus. From descriptions in Chinese literature corn is known to have been established in China within less than a century after the voyage of Columbus. But this seems a short time for any plant to have become widely known and used. Besides, this particular corn is so different from anything in the New World that it must have been developed in the Old World, and for that to happen in a natural way would take a very long time. These ideas are brought out in Bulletin 161 of the Bureau of Plant Industry, which gives also an account of some cross-breeding experiments with the new corn and the changes which crossing produces in the grains the same season."

ANNUAL MEETING OF THE NATIONAL TRAFFIC LEAGUE.

The National Traffic League, with a membership representing 92 individual firms and 71 trade associations (29 of which represent 25,622 firms and individuals), held a two-days' meeting at Chicago in November under the presidency of J. C. Lincoln, traffic commissioner of the St. Louis Merchants' Exchange. From The Traffic Bulletin we obtain copy of the record, from which the following synopsis is made:

INTERSTATE COMMERCE COMMISSION.

The report of the committee on "amendments to the interstate commerce act" proposed amendments to be made. The amendments are—

"Giving the Commerce Commission, in its discretion, the power to prohibit the taking effect of advances in the existing rates.

"Giving to shippers the right to route freight.

"Insertion of rates in the bill of lading, and erroneous quotations."

These subjects have been referred to the legislative committee, who presented them to the House committee on interstate commerce. Bills were then introduced by Hon. Chas. E. Townsend of Michigan, but they died in the committee's hands with the special session. New bills will be introduced with the opening of the regular session of Congress. The President also was appealed to by the committee, who were informed that a committee from the Cabinet had been selected to review the entire law. Subsequently the committee met Messrs. Knapp and Prouty of the Commission, together with Mr. Townsend, by all of whom the law was carefully gone over. [The committee and the subjects were continued by the League.]

RAILWAY AGREEMENTS VS. POOLS.

In view of the diversity of action by various bodies on the questions of agreements and pools and of a remodelling of the Sherman act, as proposed by former President Roosevelt and by the National Civic Federation, it was deemed best to receive and file the report by the committee on the subject and to suspend action pending an expression by the Taft administration.

MINIMUM WEIGHTS AND LARGE CARS.

The committee on "minimum weights to be applied where small cars are ordered and large cars are furnished," reported that in February, 1909, Chairman Holbrook of the Official Classification Committee and Chairman Becker of the Western Classification Committee had been petitioned to have Rule 27 modified to conform to rulings made by the Commerce Commission and with their decisions in many cases brought before them. On August 3 a reply was had (after Mr. Holbrook had been personally approached on the subject on July 26 and August 3) who said that "the subject had been considered by his committee, who felt that the adoption of any suggestion would entail upon carriers many hardships which were not thought of when the ruling was made; that subsequent to the ruling attempts had been made to obtain large cars when ordering smaller cars, when the shipper knew that smaller cars were not available; that the question was receiving the attention of the railroads, with the hope of finding some solution which would be fair to all concerned, but, owing to the vacation period interfering, action would be deferred until fall."

No action has been taken by the Official Classification Committee, and the League committee says that, "while many publications made by agents of carriers and many publications made by individual lines have been amended so as to conform their

rule with the rulings of the Interstate Commerce Commission, such action has not as yet been taken in Official and Western classifications;" and the Western Committee has "negatived the petition."

The League continued the committee with instructions to communicate with Commissioner Clark with a view to securing the necessary modification in the Official or Western rules to conform to the Commission's rulings.

RESPONSIBILITY OF CARRIERS FOR TARIFF.

The committee on this question made the following report:

"Attention is called to the following:

"Interstate Remedy Company vs. American Express Company (16 I. C. C. Rep. 436): While it has been repeatedly emphasized by the Commission that the shipper is put upon notice of the rate by publication of the tariff, it has not been held that a shipper must determine for himself the lawfulness of a rate, regulation or practice, upon his peril. The responsibility rests upon the carrier to have lawful rates and rules in effect, and every shipper may with safety rely upon such rates without fear that they will be withdrawn as illegal after he has made shipment thereon, resting in the confidence that they are lawful so long as they are in force. If subsequently found to be unlawful the carrier is subject to penalty for the institution and maintenance of such rates or rules, but the law does not contemplate that the shipper shall move upon any other theory than that the provisions of the carriers' tariff are in full compliance with the laws' demands."

"Pertinent to this, we copy the following from page 380 of the Railroad Age Gazette of October 27, 1909:

"Wisconsin: Failure to Post Rates.—Kiel Wooden Ware Company vs. Chicago, Milwaukee & St. Paul: The petition asks for refund on certain shipments of logs to Kiel, Wis., on the ground that the schedule of rates on which the charges were based had not been filed at the station at Kiel and were therefore not in effect. Schedules must be filed with the Railway Commission and at the stations to and from which the rates in such schedules apply before becoming effective, and therefore the schedule in question, not having been filed at the station at Kiel, the rate collected was unlawful and refund ordered."

"It will be remembered that Mr. Justice White in his opinion in the case of the Texas & Pacific Railway Company vs. The Cisco Oil Mills, 204 U. S., 449, decide February 25, 1907, as follows:

"Whether by failure to post an established schedule a carrier became subject to penalties provided in the act to regulate commerce, or whether, if damage had been occasioned to the shipper by such omission, a right to recover on that ground alone would have obtained, we are not called upon in this case to decide."

"You will notice:

"(a) The Interstate Commerce Commission state that every shipper may with safety rely upon the lawfulness of the carrier's rates, without fear that they will be withdrawn as illegal after he has made shipment thereon, resting in the confidence that they were lawful as long as they were in force."

"(b) You will notice also that the Wisconsin commission (and the underlying intent of the Wisconsin law and the interstate commerce law is usually the same) held that when the railway company had not complied with the law as to publicity (posting) of the rates, the shipper could not be held for the payment of a tariff rate not posted and of which he had no knowledge."

"(c) While the position of the Interstate Commerce Commission is where questions may arise of the lawful rates because of tariffs not being posted at given points, the records of the Commission are sufficient to determine the lawful rate; that in contested cases the shipper should pay the lawful rate via the route the shipment moves, and then file claim for refund if he believes he has been overcharged. It is apparent that the final word has not yet been said on the subject of the lawfulness of the unposted rates. Notice particularly that Mr. Justice White does not give any ruling contrary to the Wisconsin commission's decision; he simply does not decide either way."

"In view of all the facts, it would appear that there has not yet been a clear-cut, unequivocal, final determination of this question of the legality of certain rates."

"In view of all the facts, it would seem that all that can be done with this subject at this time is to leave it as an unfinished matter on the docket and wait for some case to be decided by the court of final resort, a determination of which will settle the point which Mr. Justice White avoided expressing an opinion upon."

The report was adopted and a resolution approved that the president take the matter up with the Interstate Commerce Commission in order to bring about adjudication on the points raised.

FREIGHT CLAIMS.

The freight claims committee reported in substance that claims are handled more promptly by the carriers than hitherto. The committee are of the opinion that "proper checking of rates" by the accounting department would reduce the volume of claims at least 90 per cent"; and they especially commend the practice of the Rock Island and Frisco Systems, whose revision clerks in the auditing departments, when they discover an overcharge in billing, promptly file a formal blank voucher setting forth the details, which they at once send to the delivering agent, or, if a prepaid item, to the forwarding agent, with instructions for the immediate settlement on surrender of the original expense bill or original bill of lading." The system is said to work in a satisfactory manner.

INCOMPLETE EXPENSE BILLS.

Relative to legible expense bills the committee in charge reported recommending the compliance with the conditions set forth in a report and resolutions adopted by the committee after a conference with a committee from the American Railway Association. These rules apply more particularly to package freight, but provide, in general terms, that the agent at original (and agents at transfer and junction points, where there is a rebilling) shall waybill freight to show (1) the car number and initials; (2) rate, weight and charges; (3) advance charges, including demurrage, switching, etc., each item to be shown separately; (4) (when weighed in transit) gross, tare and net weight; said information when practicable to show on prepaid as well as collect bills.

ORDER BILL OF LADING.

The League approved the following resolution previously adopted by the American Bankers' Association:

Resolved, That it is the sense of this conference [of the committees of the League and the American Bankers' Association] that Congress be asked to pass a law governing bills of lading covering interstate shipments, to embody the features contained in the "bill relating to bills of lading," which was pending before the House committee on interstate and foreign commerce, and made the subject of four hearings before a sub-committee last winter; and that we recommend to our respective associations or organizations the taking of such steps as will aid in the enactment of such measure by Congress.

UNIFORM BILL OF LADING LAWS.

The Commissioners on Uniform State Laws having agreed upon a bill of lading which will be presented to all state legislatures for enactment as law, the committee on the subject recommended that the League assist in that work.

ELECTION OF OFFICERS.

The League re-elected officers for the ensuing year as follows: President, J. C. Lincoln, St. Louis; Vice-President, W. M. Hopkins, Chicago; Honorary vice-presidents—J. M. Belleville, Pittsburg; J. S. Marvin, New York; H. W. B. Glover, Atlanta; J. S. Davant, Memphis; J. H. Johnston, Oklahoma City; E. G. Wylie, Des Moines; C. R. Rust, Duluth; F. B. Gregson, Los Angeles; D. O. Ives, Boston; Secretary-Treasurer, W. E. Cooke, Chicago.

WHAT BECOMES OF THE CORN?

It is difficult for some people to understand from whence arises the great increased consumption of the corn in the last few years, although it has been repeatedly referred to in connection with the extended use of glucose in various manufactures in which its saccharine qualities are a valuable addition to the wants of the community, says the Chicago Evening Post. The principal cause of the more extended consumption of corn is, however, explained in the following paragraph from the annual report of the Secretary of Agriculture, issued the first of the present month, which says:

"There has been a breaking up of range herds consequent upon the enforcement of the 'no-fence' law by the National Government and by encroachments of the settlers upon the ranges, made possible by the practice of 'dry farming.' Not all of the cattle have gone directly from the ranges to the

slaughter-houses; a great portion of them has gone to farms for maturing and finishing, largely upon corn. This extra demand on the corn crop is reflected in corn prices, which are now higher than they have been since the records of the Department of Agriculture began, in 1866, except for 1881. Half a dozen years of this abnormal movement of beef cattle from ranges to the great markets began to tell upon the supply in 1908, when the deliveries fell off in a marked degree, and the decrease continued in 1909."

A year ago December corn was bringing 61 $\frac{3}{4}$ c and May 63 $\frac{1}{4}$ c, and there are no fundamental reasons for their being lower than that now.

ELEVATORS AT BILLERICA, MASS.

The grain elevator at Billerica, Mass., heretofore mentioned in this column as in course of construction for Elmer E. Cole, has been completed, after some little delay in getting the steel siding placed. The house is now in operation and giving its owner much satisfaction. He is especially pleased with the power plant, being an 80-h.p. Advance Producer Gas Engine and much less expensive to operate than the steam plant used by Mr. Cole in his former elevator.

The elevator in question is entirely modern and one of the best in the New England States. The storage capacity is 70,000 bus. and about 30 cars of sacked stuff. The machinery was supplied by Dow of Boston.

The elevators in the main part of the elevator are

CONSUMPTION AND GRAIN ELEVATOR DUST.

"The mortality from consumption is known to be very much greater among persons employed in the so-called dusty trades than among those working in the open air, or under otherwise more sanitary and favorable conditions affecting health and life," says Frederick L. Hoffman in a recent Bulletin (No. 82) of the Bureau of Labor. Dust by its mechanical properties causes specific injury to the lungs and delicate membranes of the air passages; but fortunately for the worker in grain elevators, the organic dust by which they are affected is less injurious than metallic dust occurring in many other industries. The kind of dust is an important matter in considering its effects and moreover the constancy of the exposure to dust is a further problem of the study of dust pathology, which plays an influential part in the making of laws governing the dust nuisance in industrial establishments. Indeed, the prevention of dust where workers are constantly and continuously employed is one of the first steps toward the mitigation of the "white plague" and is much more to be relied on than preventive medicine that years ago was so much and so fruitlessly resorted to. Dust, says Dr. H. S. Anders (IX Pa. Med. Journal, p. 247), "may be a three-fold factor in pulmonary tuberculosis, because, first, it may act as a predisposing cause, as a direct physical irritant to the respiratory passages, thus inflaming the mucous membranes and weakening their resistance to bacillary entrance;

the seeds of corn being replenished with a volatile salt, inasmuch that if they are not well dried in the sun before they are laid up, they heat mightily, and turn presently to a powder; it can not be but that some thin particles must fly off from the husk that surrounds them, over and above the powder and rotten dust proceeding from the consumption made by moths, worms, mites, etc., and their excrements. Now there being a necessity of sifting and meting corn and other grain, the men employed in that service are so plagued with this powder or dust, that when the work is done they curse their trade with a thousand imprecations. The throat, the lungs, and the eyes sustain no small damage by it, for it stuffs and dries up the throat; it lines the pulmonary vessels with a dusty matter that causes a dry and obstinate cough; and it makes the eyes red and watery. Hence it is that almost all who live by that trade, are short breathed, and cachetic, and seldom live to be old; nay they are very apt to be seized with an orthopnea, and at last with a dropsy. Besides, this powder has such a sharpness in it, that it causes a violent itching, all over the body."—Treatise of the Diseases of Tradesmen, Ramazzini, English Ed. of 1705, pp. 170, 171.

This opinion of a careful and scientific observer of actual conditions has been confirmed by subsequent inquiries; but there has been so decided a change in the methods of grain handling in large quantities that the dust nuisance has been materially reduced. Another factor favorably affecting the health conditions in this employment is that the habits of the men have undergone a material improvement for the better.

Halford, A German authority on trade diseases, writing in 1845, observed that grain measurers and dusters were exposed to an extremely irritating dust injurious to the lungs, while the bent position on the part of the workmen during the sifting process was unquestionably a predisposing cause of lung diseases.

Hirt studied exposure to grain dust at considerable length, including threshing and other agricultural employments. He called attention to observed differences in the effects of different kinds of grain, but his conclusions were not final. His analysis of grain dust proved the presence of considerable quantities of mineral matter, chiefly silica or common earth, while the organic particles were minute portions of the grain proper and other vegetable matter. In his opinion the effect of the dust was extremely irritating, especially to those not accustomed to it, causing much cough and acute bronchial catarrh. While he considered rye and wheat dust most injurious, because of the peculiar microscopical structure of the grain particles, he refers to the much larger relative quantity of dust generated in the handling of oats, but apparently the observations were not conclusive. Of course, in the case of agricultural laborers the actual exposure is comparatively short and in this respect less serious than in the case of men employed in the handling and storage of grain at terminal elevators. Even in the case of these men, however, there is the advantage of seasonal employment, and since practically no skill is required, many of the men employed are only casual laborers. This accounts, in part, for the fact that the consequences of dust exposure, which would otherwise probably be serious, have not been observed to be such in actual practice.

An extended account of the atmosphere in granaries is included in the Annual Report of the Chief Inspector of Factories and Workshops of Great Britain for 1904. While this report describes conditions typical of English ports, the descriptive account is equally applicable to present-day conditions in this country:

"The cargoes of grain arrive at irregular and uncertain periods, and it is only when they are being discharged that the whole of the machinery is at work, and an opportunity of complete inspection is afforded. I found that the grain after being elevated from the ship's hold falls down through a chute into the basement. In the course of its descent much of the dust gets separated from the grain, and there are two openings near the bottom of the chute through which the dust is drawn by an exhaust fan into a settling chamber. A second elevator takes the grain from the basement to the top floor, where it is carried by conveyor bands to the bins. No automatic weighers are used. A considerable amount of dust is said to be given off as the grain falls into the bins. Only three or four men including the foreman are usually employed, and the number on no occasion is said to exceed six. The foreman stated that he had been engaged in this work for 13 years and had never felt any ill effects from the dust. Two other men informed me they had been employed here for three and six years respectively, and that during this time their health had been very good. Only about one hour's trimming at a time is necessary for each bin, and the men are frequently not employed in this work for days together. Russian oats, it is said, give off the greatest amount of dust."

A similar inquiry was made into the health of



ELMER E. COLE'S ELEVATOR AT BILLERICA, MASS.

driven by individual motors,—an 11-h.p. on the main elevator and receiving separator, and a 5-h.p. for driving the conveyors, etc. The power is belted directly to the main line for driving the grinding machinery and the elevators used in connection with them. There is also a 20-h.p. gasoline engine for unloading coal and elevating grain when the large engine is not in operation, and also for making electric lights.

The machinery for grinding consists of: One 3-pair-high 9 x 24 roller mill, one 24-in. Excel Attrition Grinder, one No. 6 Style "A" Excel Corn and Cob Crusher with four stands of elevators for operating same, one 11 x 36 reel for corn meal, one Invincible Cracked Corn Scourer. All of the machinery is so arranged that by the use of clutches and cut-off couplings each machine can be operated separately.

A grain inspector has been appointed to serve through the winter season at St. John, N. B., which expects to handle considerable Canadian grain for export brought in by the I. C. Ry.

Interior Warehouse Company has compelled its house at Ilo, Idaho. Work was started on October 1 and grain was delivered as soon as the first 40 feet of floor was laid and the house was built around the grain, which was piled 30 sacks high. The house was filled before it was completed, which is being some. It is 200 by 80 by 20 feet and 101,000 sacks of grain are stored in this structure. This company also owns a warehouse 190 by 50 by 14 feet, used exclusively for storing hay.

second, it may carry infection directly by means of dried, fresh tubercular sputum that some ignorant or careless consumptive has recently expectorated; and, third, it may aggravate tuberculosis by converting an incipient and curable case into one of rapid and violent destruction of living tissues because of the addition of pus-producing germs."

For these reasons industrial dust is much more dangerous than municipal, or street dust, since, while the former may induce, or cause pneumoconiosis, or lung affections not tuberculous in character, but tending in that direction or to "fibroid phthisis," the latter is absolutely much more heavily burdened with disease germs than industrial dust. We find therefore, that both the length of life and the mortality by consumption of workers in occupations with exposure to municipal dust is relatively high compared with other occupations, taking both English and American statistics as a guide.

Speaking particularly of workers in the grain handling and storage establishments, one of the class of occupations with exposure to organic dust, the Bulletin (pp. 498-503) says:

The liability to dust inhalation affects nearly every employment necessary in connection with grain handling or storage, and the employment has, from the earliest times, attracted the attention of authorities on occupation diseases. Ramazzini, writing in 1670, held that:

"All grain, and especially wheat, whether kept in pits under ground, as in Tuscany, or in barns, as in the countries upon the Po, have always a very small powder mixed with them; I mean not only that which they gather upon the barn floor in threshing, but another worse sort of dust, that grain is apt to throw from itself upon long keeping. For

persons employed at other grain elevators, and although some of the work people had been at work there for many years, they made no serious complaint of having suffered as the result of exposure to grain dust. The report includes a descriptive account of a grain elevator at Leeds by the local inspector of the department, who remarks that,—

"The most perfectly equipped place I have seen is in Leeds, in a warehouse or grain-cleaning factory, belonging to, but not connected with, a large flour mill. It is situated on the side of the river and the grain is conveyed direct from the boats into the factory by means of an elevator. The grain is carried by the elevator to the weighing machine, then it passes through a cleaning machine, where the dust and all dirt, soil, bits of stick or hemp, etc., are extracted, the dust being drawn by fans into one receptacle and the other rubbish into another. It afterwards passes up to the silos in wooden pipes. Everything is covered in, so that from the time grain enters the mouth of the elevator to the time it reaches the silo it is never exposed. The only dust that escapes is just round the weighing and cleaning machines, as some of these joints and connections can not be perfectly dust tight, but as the processes are automatic it is not necessary for any man to be constantly present to attend to the work. From the silos, which are completely covered in, the grain runs down into sacks at the bottom, when required to be taken to the mill. Satisfactory as this may be inside, there are those men in the boats, engaged in shoveling the grain towards the mouth of the elevator, who are in the midst of clouds of dust all the time."

Here, again, the general conclusions were to the effect that the employment had not been observed to be decidedly injurious to health, and these conclusions were confirmed by the local inspector for Newcastle-upon-Tyne, who, after stating that most of the work at granaries was of an intermittent character, so that the men were only for brief periods exposed to the dust, further stated that he had not observed any evidence of injury to health, but ascertained that the opinion of the men was to the effect that the dust from American grain was considered more objectionable than that from Hungarian and Egyptian grains, the American grain being said to contain sharp particles of husk which, it was alleged, had a very irritating effect on the respiratory passages.

The subject is further considered in the Annual Report of the Chief Inspector of Factories and Workshops for the year 1906, who, referring to a special report by one of the local inspectors for East London, states that it has been found that an ordinary handkerchief tied over the nostrils and mouth is a much better protection than respirators, for the latter become speedily choked with dust and breathing becomes most difficult. This inspector stated further that—

"At two large dockside granaries bucket elevators were chiefly used at one and band conveyors at the other, the dust generated being worse in the latter case, escaping chiefly where the corn leaves the shoots and falls onto the band. In both these cases respirators were provided for the men, who absolutely refused to use them. In the process of turning over the corn to prevent heating, and shoveling it into the shoots from the sides of the bins, the men work in a cloud of dust. If the bins were made funnel-shaped this latter process might in many cases be dispensed with, but more space would be required. The composition and amount of dust in corn of course varies considerably; some appears to be all husks and some all dried mud. I saw dust collected from an average quality of foreign barley that had been screened with a machine fitted with a fan flued to a dust chamber. This measured one sack of dust per hundred sacks of corn, and in addition to this there was the dust that escaped and other heavy foreign matter sieved from the corn."

While the evidence as to the quantity of dust generated in connection with the various processes was entirely conclusive, it was, to the contrary, inconclusive as to the health-injurious effects upon the men employed. No doubt the deliberate policy on the part of the local factory inspectors to reduce the dust nuisance in English granaries to a minimum has been decidedly beneficial, and conditions in that respect are not only much better now than they were in former years, but they are also possibly better and more satisfactory than in the large terminal elevators and cargo-loading plants in the United States.

The only available vital statistics of grain handlers and grain elevator employees in the United States are the recorded industrial mortality data, including, however, only twenty-four deaths from all causes, of which five, or 20.8 per cent, were from consumption. If the deaths from consumption and from other respiratory diseases are combined, 25 per cent of the mortality of grain handlers and grain elevator men was from diseases of the lungs and air passages. The number of deaths of men in this occupation included in this analysis is not sufficient for a final conclusion, but it is suggestive of health-injurious circumstances destructive to life and health. The facts in detail are brought out in

a tabular presentation of the proportionate mortality from this disease by divisional periods of life.

Age at death.	Deaths of grain h'nd'rs and elevator men, 1897 to 1903, due to—		Per cent of deaths due to consumption among—	
	All causes.	Consumption.	Grain handlers and elevator men.	Males in registration area, 1900 to 1903.
15 to 24 years...	1	.....	.....	27.8
25 to 34 years...	7	1	14.3	31.3
35 to 44 years...	5	2	40.0	23.6
45 to 54 years...	7	1	14.3	15.0
55 to 64 years...	2	.....	.....	8.1
65 years and over	2	1	50.0	2.7
Total.....	24	5	20.8	14.8

For the time being the conclusions regarding the health-injurious effects of exposure to grain dust rest almost entirely upon recorded and fairly competent medical observations. These observations are, in part, confirmed by the available recorded industrial mortality experience. It is much to be desired, however, that the matter should be made the subject of a thorough and qualified scientific inquiry in the Lake and Atlantic ports, where the largest number of grain elevator men and grain handlers are employed.

[By Permission.]

THE SHIPPER WHO SMILES.

BY C. S. BASH.*

A father taking leave of his son who was about to embark in the hay business in a neighboring city said, "Now, John, remember the Golden Rule of your father: 'Do unto others as you know they would do unto you if they got a chance.'" Now, gentlemen, this man has several brothers-in-law in this association; and it is the desire of the speaker tonight to suggest a limited divorce for these members on probation, with instructions that they be compelled to live as Nebuchadnezzar did, so that at the end of their probation, they will know the difference between grass and hay, or, at least, will be able to detect grass when it is mixed with hay and know enough to buy it at its value without demoralizing the trade generally and their own in particular.

The shipper who smiles is the one that lets the other fellow buy grass and weeds for hay, and who sits on the fence as it goes by and into the other fellow's car. But seriously, gentlemen, the subject you have assigned me is not a difficult one to handle. The hay shipper must smile when he gets his car door inspection from Cincinnati, and afterwards his outturn of the car. It is his only safeguard to smile; for if he doesn't, he will smile with indignation and burst, especially if he finds his No. 2 hay was sold and shipped South to Atlanta or some other sunny spot, as strictly No. 1. Please don't all smile, as it makes the writer think you have all been there. Doctors (not horse doctors) say that the grading of hay is enough to make a horse laugh as it is done in many of the markets today; and this is not a reflection on the horse either, as you all know he is away ahead of all of us, as he always has horse sense and we have not.

But let us be serious a moment. Anxiety weighs heavily on the heart. Worry kills, not work. Don't you see, then, not only why he who smiles succeeds? His heart-action is good; his mind is clear; his feelings for his fellowman are always more generous; he treats the farmer better and his competitor better. He scatters sunshine everywhere he goes. He loves his God and God loves him. They are the salt of the earth, those who smile; we can't get along without them. They are always optimists, never pessimists. Let us all take a smile.

"Whom the gods wish to destroy, they first make mad." This was the rule in the time of Virgil, not today. Now, whom the gods wish to destroy they entice into the hay business alongside of a shipper who smiles; and his career is short, for like hay, he is cut down and withereth, is baled and grade rejected.

Wheat exports from Pacific Coast have about ceased—for the present, at least.

*From an address by the author at a meeting of the Northeastern Hay and Grain Dealers' Association, at Fort Wayne.

A MODEL WISCONSIN ELEVATOR.

There has just been completed a model grain handling and storage elevator for the Northern Milling Co., of Wausau, Wis. The builder, T. E. Ibberson of Minneapolis, Minn., has met the needs of the milling company by erecting a 35,000-bushel capacity house on a solid foundation and with convenient arrangement of elevating and distributing machinery.

The elevator is set on twenty concrete piers extending to bed rock at an average depth of 16 feet. The main frame is made from No. 1 pine timbers, the cribbed walls from No. 2 hemlock and the bin bottoms are also cribbed thus insuring an absolute tight bottom. The exterior of the building is covered with corrugated galvanized steel, except the front which is a brick veneer, made to correspond with the mill front. The roof is standard steel galvanized with joints all soldered.

The basement story is 11 feet high. It has a concrete floor on level with the car-floor, and is



A MODEL WISCONSIN ELEVATOR.

equipped with one automatic Clark Unloading Shovel, a Sonander Automatic Scale, a freight elevator of 2,000 pounds' capacity, a cast iron boot, and mixing conveyor. All shafting is hung on drop hangers, leaving the main floor all clear for a working room, and the storing of feed and sacks. All bins are provided with steel telescope spouts and cast iron turn-heads and gates, and the grain from all the bins can be drawn back to either the automatic scale or mixing conveyor.

The elevator is provided with one short stand of elevators to take the grain as it comes from the car and deliver it to the automatic scale. The scale then delivers it direct to the main elevator, which takes it to the top of the cupola and there discharges it to a No. 2-10 inch Gerber Spout, which distributes it to the different bins.

The power is furnished by a 20 H. P. General Electric Back-gear Motor and the power is distributed by rope-drive to the top of the elevator and a belt-drive to the carshovel and short elevator.

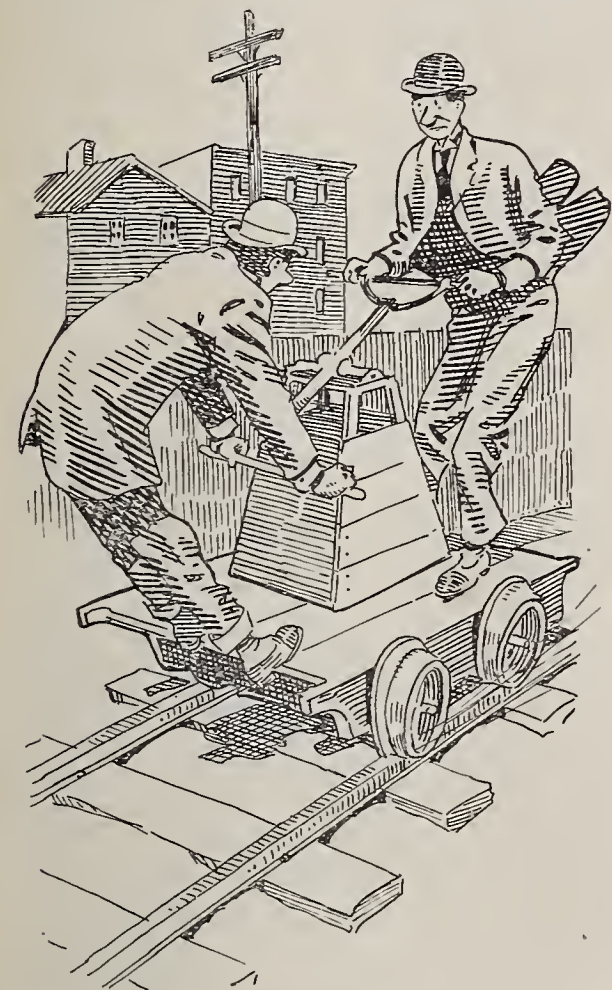
Prof. Buffum at Worland, Wyo., is credited to have produced, after 17 years of experiment, a new "wheat" by crossing winter wheat with winter em-

mer. The new "wheat," it is explained, was obtained from what the farmer-scientist calls an "emmer sport," a sport being a plant (or animal) that changes its character as a result of unusual conditions. This sport was obtained by extraordinary attention to the soil moisture and the elements which contributed to its growth. From the "sport" and the hardy winter wheat a hybrid was developed. No seed is on the market.

[For the "American Elevator and Grain Trade."]
THE IMPROMPTU ELEVATOR.

BY GUIDO D. JANES.

Charlie Rogers was feeling quite elated. He had just purchased a water-tank from the railroad and



IN PURSUIT.

had converted it into an impromptu grain elevator. This he was using while his new 12,000-bushel elevator was being erected.

"It is just this way," he remarked to his house foreman, Seth Blow, as the two were sojourning on top of the tank, placing bottles of bisulphite of carbon in the wheat. "I intend to get rich quick, and then end my days in prosperity, the owner of a large terminal etc—"

He did not finish the word nor sentence; for just then a freight train sauntered up to them, paused and made a noise directly underneath. And before they could criticise the said noise the grain began to settle just as though some individual were drawing it off at the loading spout.

"Well, I declare. Mercy, goodness," added Charlie, changing the topic of conversation from that of pleasantness to adversity. "I believe some thief is confiscating our stock in trade. Help! Help!"

"Be calm," returned the foreman, turning himself into a receiving sink for the sorrow of his boss. "We will take our elevator leg and kick the guilty parties on the shins."

"Good scheme; but we must get busy at once. If we don't, all our wheat will be gone. Dear me, it makes me feel—"

"See, here is the trouble," broke in the foreman, leaning over the side. "Look; if that ain't the limit."

Rushing up to where the foreman was, Charlie gazed over the tank; and there to his surprise and disgust he observed something that made him feel like No. 3 wheat; for there was a green fireman using the flexible car spout as he would a water-tank spout, and filling up the engine tender with grain. He imagined it to be water.

"Say," yelled the elevator owner; "you've got your dates mixed. This is no longer a water receptacle, but a wheat tank. Haven't you any sense? If not, I'll get a piece of belt conveyor and convey you some. Stop doing that instantly."

The fireman did not hear the remark, for just then the engine blew off, and a second later, thinking the tender to be sufficiently full of "water," he cut off the spout, withdraw same, and told the engineman that he was now ready to saunter along the right of way. The said engineman replied "All right" on his whistle by blowing it four times and then two times; after which the train pulled out.

"Well, I like that," ejaculated Charlie. "I have heard of traveling sieve cleaners, but never traveling folks that clean us out of grain. I'll retaliate, however, and cause them to feel blue over the blunder."

"How?"

"By chasing them on a hand-car. Want to accompany me?"

"Sure."

So both men climbed down from the impromptu grain elevator, rushed over to a section gang that was laying a spur track over the Dwight's flour mill, and borrowed a hand-car. This being done both men jumped upon it, and away they went. They lubricated their hands with saliva, and pumped the car vehemently. They labored diligently and consistently, and five miles out of Ducktown were sauntering along at the rate of many miles per hour.

"This is—is—get—ting—monotonous," gasped the foreman, becoming a little fatigued and out of sorts. Let's pause and return. It is better to prevent other foolish firemen from spoiling the rest of our grain than to cry over spilled milk. Besides the blisters on my hands are becoming unpleasant."

"Never; I'll pursue the fellow I am after; bless him out and make him return the wheat f. o. b. Ducktown. It is—"

Just at this point they rounded "Sand Cut," the long curve just this side of Mentor, and not fifty yards in front of them they caught sight of the freight train. It had paused; for the engine had no water.

"Jump," said the foreman, seeing that the car could not be stopped in time to prevent a rear end collision. "Let us pile off."

He then leaped off, followed by Charlie; and in a very brief time the conveyance bumped into the caboose and journeyed into posterity as kindling wood. Gathering themselves up from the cindered right of way, the grain man and his foreman-rushed up to the locomotive.

"Say," remarked the former when the destination was reached; "haven't you got any sense?"

"More than you have," replied the engineman; "why?"

"Because you tapped an ex-water tank, or my impromptu grain elevator, and instead of securing liquid you obtained wheat."

"Nonsense! You're crazy."

"No, I am not. Look into your tender and see."

The overalled man did so. He climbed over the coal and gazed down into the place indicated. Wheat was there, but no water.

"Who did this?" he demanded.

"He did." And the foreman pointed to the green fireman.

"Well, we will apologize for this. You go back though to your place of business and paint thereon in bold letters this: 'No water tank; but an elevator.' This will prevent future errors. We will also return your wheat tomorrow. Is that satisfactory?"

"Yes; much obliged."

"You're welcome."

Massachusetts sent an ear of corn to the National Corn Show at Omaha Crowned by Geo. F. Stickney of Boston on his farm near Newburyport. The corn is exhibited in a specially made velvet-lined case, from the Towle Silver Works. The ears are each over a foot in length, the kernels measuring from five-eighths to three-quarters of an inch across the face and shelling three-quarters of a pint of corn to the ear.

SECRETARY WILSON'S REPORT.

Secretary James Wilson's Report on the operations of the Agricultural Department was published on December 1. It is as usual a lengthy and interesting document, covering 152 printed pages and a wide range of topics, among which the following excerpts may be found of special interest to the grain trade:

AGRICULTURAL VALUES FOR THE YEAR.

Most prosperous of all years is the place to which 1909 is entitled in agriculture. The yield has been bountiful with most crops, and prices have been high. Advantageously situated as he is in most respects, the farmer is less and less generally compelled to dump his crops on the market at time of harvest. He does not need to work for his board and clothes, as he often did in the former time when prices were so low as to be unprofitable.

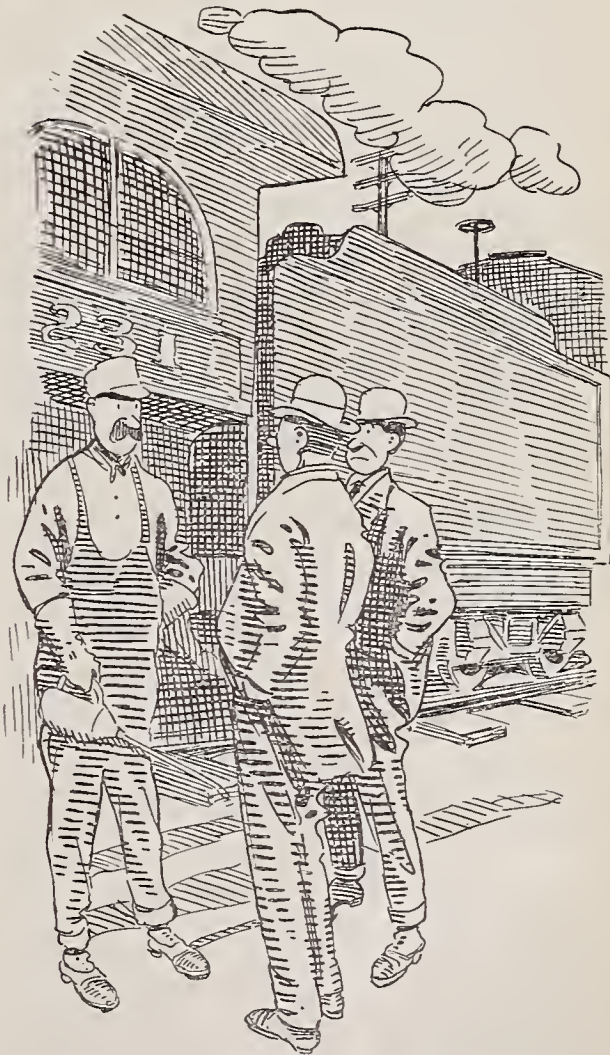
The value of the farm products is so incomprehensibly large that it has become merely a row of figures. For this year it is \$8,760,000,000; the gain of this year over the preceding one is \$869,000,000.

Ten years ago the value of the products of the farm was only five and one-half times the mere gain of this year over 1908; it was little more than one-half of the total value of this year. The value of the products has nearly doubled in ten years.

If the total value of the farm products in 1899, as established by the census, is placed at 100, the value for 1903 is represented by 125, for 1904 by 130, for 1905 by 133, for 1906 by 143, for 1907 by 159, for 1908 by 167, and for 1909 by 186.

Eleven years of agriculture, beginning with a production of \$4,417,000,000 and ending with \$8,760,000,000! A sum of \$70,000,000,000 for the period!

It has paid off mortgages, it has established banks, it has made better homes, it has helped to make the farmer a citizen of the world, it has pro-



"SAY, HAVEN'T YOU GOT ANY SENSE?"

vided him with means for improving his soil and making it more productive.

The farm values of the chief crops (cereal) are named as follows:

Corn	\$1,720,000,000
Wheat	725,000,000
Oats	400,000,000
Barley	88,000,000
Rye	23,000,000
Flaxseed	36,000,000
Rice	25,000,000
Hay	665,000,000

RIISING PRICES OF FARM PRODUCTS.

The increased cost of living within recent years permits an inquiry as to whether farm products have increased in price in greater degree than other commodities have. The comparison is preferable for the farm products for which farm prices are

known as far back as the beginning of the present movement of advancing prices, which began in 1896. The method will be to take the mean price of 1896-1900 as the base on which the price of each year will be relatively established, this base or mean of the five years mentioned being regarded as 100. Then if the price of a given commodity in a given year is above the mean for the five years its increase will be expressed as above 100, as, for example, by 102; if below, perhaps by 97, or some other number under 100. By this procedure the relative position of the price of wheat on the farm may be directly compared with the prices of other commodities.

In 1909 the relative price of all commodities, according to a commercial authority, is expressed by 122.6, the mean of 1896-1900 being regarded as 100. Only one year, 1906, reached a higher point since 1896, and that was indicated by 126.7.

All crops for which a farm value per bushel or other unit is known are above the relative increase of price of all commodities. The price of corn per bushel stands at 218.6 in 1909, compared with 100 for the mean of 1896-1900, and no other crop, as far as known, has risen as high, although oats reached 209.6. Third in order are potatoes, with 192.4; then follow wheat, with 166.2; rye, 162.1; huck-wheat, 161.9; tobacco, 161.4; barley, 147.3; cotton, 138.4; hay, 122.9. All of the foregoing crops may be combined for an average, and this average, which has been weighted, is 180.9. For live stock the average, as previously mentioned, is 193.1. For the crops particularized and live stock combined the representative number is 186.9. This is an average that is weighted according to the values of the various crops and classes of animals. It has not been equaled during the price period under review beginning with 1896.

It is apparent that there has been a tendency of animals and crops of the farm to increase in value per unit at a faster rate than all commodities have increased.

Some confirmation of this conclusion may be obtained by comparing the farm products with other commodities within the field of wholesale prices, that is, after these products have left the farm and have been more or less manufactured or prepared. The Bureau of Labor's investigations of wholesale prices afford materials, and the prices of 1896-1900 stand for 100; the latest year is 1908. In that year the average for all commodities had the relative number 126.4, with which may be compared the number 141.9 for farm products, 128.7 for foods after they have left the farm, 121.9 for cloths and clothing, 125.3 for fuel and light, 124.9 for metals and implements, 132.8 for lumber and building materials, 106 for drugs and chemicals, and 119.5 for house-furnishing goods.

In wholesale trade, therefore, farm products exceed all other classes of commodities in relative increase of price since 1896, and food is exceeded only by farm products and by lumber and building materials.

The general fact is that in the upward movement of prices since 1896 the products of the farm have fared better than any other class of commodities, the only large item, that is an exception being unfed beef cattle, the farm price of which has now barely begun to rise above the price level of 1896-1900 for beef cattle.

Taking up now the work of the Department in detail, the Report devotes a large amount of space to the work of the Bureau of Plant Industry. "A rapidly growing interest is being shown in this country in what may be termed agricultural readjustment," it is said. "The shifting and changing of economic conditions due to world-wide influences and the almost complete reversion of old and established agricultural practices and methods due to purely local causes all tend to make the study of crop production and crop adaptation more and more complicated each year." This leads naturally to the work of developing a comprehensive system of dry-land farming, and stations are at work in this line at thirteen points in Montana, the Dakotas, Nebraska, Kansas and Texas, working out cropping systems for the cereals. Then there is a word on the "reclamation projects" in Arizona, Nevada, Oregon, Montana and S. Dakota. As to forage and other crops for the dry sections, the Report says:

FORAGE CROPS FOR THE DRY SECTIONS.—The forage-crop problems for the dry sections fall within four principal lines: (1) A thorough testing of the most promising crops at hand; (2) new methods of culture for alfalfa and perennial grasses, so that they can be grown with less rainfall; (3) the search for new drought and cold-resistant forage crops; and (4) the breeding of new crops for all this section.

In the testing of promising forage crops very promising results have been secured in the northern half of the Great Plains region with Canadian field peas. It is necessary to grow this crop alone, as

the moisture is not sufficient to support the plants with a mixture of small grains. This crop has succeeded well on all the dry-land farms as far south as Amarillo, Tex.

Another important crop for the dry section is Siberian millet, introduced by the Department in 1899. This plant is proving valuable, on account of its great resistance to drought and its short season. Elaborate tests are being made with the sorghums as a dry-land crop. These plants are found to have great resistance to drought, and the quantity and quality of roughage produced per acre and the sureness of the crop make it of great importance, especially where dependence is placed on stock farming. A special feature is being made of alfalfa culture for this entire section. When broadcast even the most drought-resistant varieties of alfalfa require about 15 inches of rainfall in Dakota, 18 inches in Nebraska, and 20 inches in Texas. When cultivated in rows, however, the crop succeeds under more arid conditions.

The cold and drought resistant alfalfas which were referred to in my last report as having been obtained in Siberia are still under test, and it is hoped that out of them, by breeding and otherwise, there may be secured some strains of great value to the northwestern sections of the United States. Cultural methods as affecting the growth of forage crops in this dry region have received considerable attention. The methods of growing alfalfa in rows have already been referred to. Similar methods have been applied to growing certain grasses, with good results. In portions of the drier regions of Texas very promising results have been secured from alfalfa growing, using the crop as a pasture for hogs. It has been found that where the alfalfa is pastured growth is more abundant, owing doubtless to the much smaller evaporation of water. The evidence at hand seems to indicate that when alfalfa is pastured in these drier regions it far out-yields the crop growth in the ordinary way. Breeding to secure drought and cold resistant crops for this region is being pushed vigorously. Promising results in breeding alfalfa, millet, and certain types of sorghums have already been secured.

DURUM WHEAT.—The annual production of durum wheat at present, though difficult to determine before taking a census, appears to be at least 50 million bushels, and probably comes nearer to 60 million. The important fact, however, is that a rough estimate shows that nearly two-thirds of this production is in districts so dry ordinarily that other wheats can not be successfully grown, thus having made it possible during the past year to add materially to our wheat crop during the time of scarcity and high prices. Recently two additional interesting facts have developed: (1) The great interest taken by several of the largest mills in the country in the manufacture of patent flour from durum wheat. One of these, a Minneapolis firm, now employs a mill of high capacity exclusively on durum wheat. (2) The rapid increase in the use by foreign countries of our export durum wheat for bread flour. The export now averages considerably over 20 million bushels per annum, of which nearly or quite one-half goes to central and northern Europe, where it is used chiefly for bread.

Recently there has been an extension of the durum-wheat area into the western portions of the Great Plains and intermountain districts. A number of new mills have been added to the list of those that grind the wheat, some of which are using it exclusively. Examinations of a number of samples received from different parts of the country show that recent reports of the deterioration of the wheat are unfounded, but have been caused by the fact that much of the grain shipped east was produced in humid areas not adapted to durum wheat and often mixed with other lots of better quality. American millers need to become more familiar with the quality required in wheat of this class.

DRY-LAND CEREALS.—Durum wheat has now made its place as a semidry-land crop in the middle Great Plains region and is being rapidly extended into the intermountain dry-land districts. During the past year the work with dry-land cereals has been extended so that at the present time a comprehensive series of experiments is under way at Amarillo and Dalhart, Tex.; Akron, Colo.; Bellefourche and Highmore, S. Dak.; Williston and Dickinson, N. Dak.; Judith Basin, Mont.; Nephi, Utah; and Moro, Ore. The experimental work at each station is under the charge of men specially qualified along the lines of grain improvement and familiar with the territory in which the station is located. Although these experiments in their present form have been running but three years, and some of them for even a shorter period, the results thus far obtained in determining suitable varieties for each locality and the best dates and rates of seeding have proved of great assistance to old and new settlers in all the dry country. It is found that many of the farmers in this region who are planting cereals grow mixed varieties. This alone has probably as much to do with the low average yield per acre in the United States as any other factor. One of the objects of the work in question is to enable farmers to obtain

pure seed of drought-resistant kinds of wheats adapted to particular districts.

A very important line of investigation and study has for its object the development of hardy winter varieties of grain crops. During the past year winter wheat was grown at Williston, N. Dak., for the first time, the yield being nearly 40 bushels per acre. At Bellefourche, S. Dak., winter wheat has matured two years in succession, and the yields have been highly satisfactory—usually from 20 to 50 per cent higher than those of the best spring varieties. Extensive tests in the matter of time of seeding winter wheats have brought out the fact more forcibly than ever that the earlier the seed is planted after the 15th of August, provided moisture conditions are at all favorable, the greater will be the percentage of survival.

PROGRESS IN PLANT AND SEED INTRODUCTION.

In this department much work has been done by Prof. N. E. Hansen, in finding new fruit and nut trees, and by Mr. Frank N. Meyer in Asia, who also has found several new fruits, and will again go to the high altitudes of the Tien Shan Mountains in western China to hunt types of early-ripening cereals. The Report then continues:

An interesting development during the year has come in connection with the discovery by Mr. Aaron Aaronsohn, of Hefia, Palestine, of a very interesting wild wheat which grows on the stony mountain slopes and in the clefts of the rocks in the driest portion of Mount Hermon, in eastern Palestine. This wheat grows over a wide territory and is found at altitudes ranging from several hundred feet below sea level to 6,000 feet above, near the borders of snow fields. It is claimed that this wheat is the progenitor of our modern grain and may prove valuable as a stock for breeding strains of wheat adapted to cultivation in the dry, rocky soils of this country which at present are not considered fit for wheat culture. Arrangements have been made for securing this wheat for limited distribution to plant breeders throughout the country.

LEGUMES FOR THE SOUTH.—Special attention has been given to securing leguminous crops for the Southern States in order to make possible greater opportunities in diversification. The farther south we proceed the more limited becomes the number of leguminous pasture or forage crops that can be grown. In Florida the velvet bean has long been one of the important annual legumes. Recent studies have resulted in finding no less than 14 related species, mostly from southern Asia. One of these, the Lyon bean, mentioned in a previous report, is being grown throughout Florida this year. It is decidedly more productive in pods and seeds than the ordinary velvet bean and seems certain to replace it to a large extent. Another species, the Yokohama bean from Japan, is the earliest sort yet found, maturing in about one hundred days, and is very prolific. This particular bean gives evidence of extending the range of this important crop.

NEW GRASSES FOR THE SOUTH.—Among the new grasses recently obtained are two that give special promise of high value as hay grasses for the South. One of these is a grass sorghum from the Sudan closely resembling Johnson grass but completely devoid of the root-stocks which render that grass so obnoxious in many localities. Another, known as "Rhodes grass," is a native of Chile, but was first exploited in South Africa. Under Florida and Gulf coast conditions it thrives splendidly and permits of at least two cuttings in a season. The stems are fine and erect and the hay is of very high quality. This grass also gives promise of being valuable under irrigation in California, where extensive experiments with it are under way.

PROGRESS IN GRAIN INVESTIGATIONS.

WORK WITH WHEATS AND OTHER SMALL GRAINS.—Special studies have been made with a view to improving the varieties of wheat and the methods of growing them in the principal grain-producing sections. It will not be practicable to give an estimate of the production of durum wheat until after the next census, but the total for the season of 1909 will probably be not less than 50 million bushels. So rapid has been the spread of this type of wheat that the care and attention necessary to maintain the highest standards in the quality of the grain have not been given. It is important that careful study shall be given to this matter, as the growing of the grain from impure seed or in localities where the climate is not favorable may act detrimentally to the crop as a whole.

Efforts are being made to extend the area of winter wheat, with promising results, the Kharkof variety being especially valuable in this connection.

The work on wheats in California, which has been in progress for five years, has resulted in the introduction and extensive growing of at least two varieties valuable for their yield and milling qualities.

Special work has been conducted in the development of other grains, notably varieties of winter oats and winter barley. The further use of these crops, especially in the South, is much to be de-

sired, offering opportunities for the production of stock foods, through the grain, and also of winter pasture.

Considerable progress has been made in the work of improving American barleys adapted to the principal barley-growing sections of the Northwest. The factors of difference between high and low grade barleys have been studied in a new way—the internal structure of the grain itself—and discoveries have been made that furnish a more scientific basis for the cross-breeding and selection work which has been inaugurated.

During the year some systematic work on rice has been inaugurated, stations having been established in South Carolina, Louisiana, and California, and at one or two other points. In South Carolina the principal object of the work has been to secure varieties resistant to blight, or blast, and to obtain information regarding improved methods of culture. In Louisiana cooperative experiments have been inaugurated, having for their object the improvement of varieties in use, the introduction of new varieties, the improvement of cultural methods, etc. This work is being carried on jointly with the state experiment station and with the rice planters of Louisiana. In California some preliminary work has been inaugurated to determine the practicability of rice production in that state.

WORK ON CORN.—During the past year the amount of interest shown throughout the United States in all phases of corn work was many times greater than in any previous season. The state experiment stations are now doing a great deal in the matter of encouraging better methods of growing and breeding corn, and the work inaugurated and carried on by the Department is in general line with these studies. It is not the purpose of the Department or the state stations to produce seed corn for farmers, but rather to determine and verify by a sufficient number of experiments and demonstrations the best methods for them to follow in the production of their seed. Particular attention has been given during the year to the breeding of corns for the South and in conducting tests and demonstrations for the purpose of determining the best methods of increasing yields.

Some interesting facts have been developed regarding the effect of different methods of conserving soil moisture on the yield of the grain. In the South, where summer droughts are likely to occur, the practice of planting corn in furrows from 4 to 6 inches below the level, which has been followed so long, has been found to be based upon sound principles, and by actual test it has been shown that corn grown in this way has yielded from 4 to 5 bushels more per acre than where level cultivation was practiced. The presence of organic matter in the soil is another important factor in increasing the yields. In a number of instances heavy applications of fertilizers, as much as 1,400 pounds to the acre, have not increased the yield as much as a moderate amount of decaying vegetable matter turned under before the corn was planted.

CONGRESSIONAL FREE SEEDS.

The annual fake of free seed distribution is referred to without comment, save to say that as the price has been higher for garden truck seeds, the amount doled out has been smaller. Dutch bulbs also have been sent out "to build up a new industry" (sic). The Report continues:

The seed-testing laboratories of the Bureau have continued their effort in the interest of pure seed for the farmer. Three branch laboratories are now in operation, in cooperation with the experiment stations of Nebraska, Missouri, and Oregon. At these laboratories, as well as at the main laboratory in Washington, many hundreds of samples of seed submitted by farmers and seedsmen are being tested for the presence of adulterants, as well as for purity and germination, and the results of these tests reported.

In accordance with the authority granted by Congress, samples of seed of forage crops have been collected and examined, purchases being made of those showing signs of adulteration. This work has been conducted along lines followed in the past, the names of firms whose seeds are found to be adulterated being published. It is very gratifying to state that the practice of seed adulteration has in this manner been practically stopped, save in the cases of orchard grass and Kentucky bluegrass, and quite materially reduced even in these cases.

An educational movement for the purpose of encouraging greater interest in good seed has been carried on by means of lectures and lantern-slide demonstrations at farmers' institutes, several weeks having been spent in this work. During the past year opportunities have been afforded persons interested in pure-seed work to study seeds and approved methods of seed testing in the main laboratory at Washington. Representatives from several prominent seed houses preparing to do their own seed testing were among the number, and as a result several have purchased apparatus preparatory to fitting up laboratories in their own establishments. Hundreds of authentic samples of common

weed and economic seeds, put up in vials labeled with their common and scientific names and packed in herbarium trays, have been distributed, to be used for reference, thus enabling individuals to become familiar with the more common economic seeds and their impurities.

GRAIN STANDARDIZATION.

The work in grain standardization during the past year has continued to bring forth much valuable information and many data relating to the value of the factors of quality and condition in fixing commercial grades of grain and the importance to the American public of those grades, as well as of the methods and practices of fixing them. Efforts have been exerted toward bringing about a better understanding of the various phases of the problem of grading commercial grain, and much good has been accomplished. As the possibilities of the work come to be better understood, it is fast gaining the support and cooperation of progressive grain merchants, grain-elevator owners, and grain-carrying railroads, and there is a growing appreciation of the Government's interest in commercial grain problems.

The work of investigating the condition of American cargoes of grain on arrival at European ports during the past three seasons, as mentioned in the last report, has been brought to a conclusion, and the data bearing upon the important phases of that work, together with other information collected which is of value to the grain interests, are now being prepared for publication.

The results of the grain-standardization work are being manifested in many ways, principally in an increased activity among influential grain interests toward bringing about more satisfactory conditions with relation to grain-inspection practices, with the noticeably desirable result that the grain trade generally is beginning to realize the seriousness of the question. The introduction into the grain business by the Department of Agriculture of a quick method for testing moisture in grain has proved an important factor in causing greater care to be taken of corn on the farm, as it has been instrumental in educating the grain buyer and handler with regard to the moisture content and its effect upon grain values. This has no doubt been an active influence in the disappearance of the open-rail corn-crib or pen from the corn belt. Railroad and elevator companies are becoming interested in the work, because of the close relation of some of its phases to a subject of much interest to them, known as "natural shrinkage" in commercial grain.

USE OF LEGUMES IN THE SOUTH.

Our work during the past few years in encouraging the use of leguminous crops in suitable rotations for the rebuilding of exhausted soils is showing marked results. As compared with five years ago, cowpeas are more extensively grown all over the South, and improved methods of saving the seed through the use of machinery have become established in various localities, particularly in eastern Tennessee and southeastern Missouri. Other leguminous crops have become established and are being used in rotations in scattered sections. The extended use of vetch is pronounced in North Carolina and South Carolina and parts of Georgia and Louisiana, while bur clover prevails in northern Alabama, crimson clover in Virginia, Japan clover in Louisiana, Arkansas, and Mississippi, and alfalfa in the black, waxy, and alluvial soils of all the Southern States.

The work of this Bureau covers the department of farm management, farmers' co-operative demonstration work, bureau of soils, entomology, biology, experiment stations, etc.,—a vast institution, indeed, whose work has been of a high order of merit and efficiency. Speaking of field crop insects, the Report says:

The so called "Green Bug" was practically absent from most of its range until the early fall of 1908, on account of its great reduction in numbers by natural enemies, but studies were continued in which it was found that this insect has twenty-five native food plants and a number of parasites hitherto unknown. Moreover, a knowledge has been gained of just when and under what conditions the parasites of the "green bug" can be depended upon to prevent an invasion, and what the farmer must do himself to reduce the severity of the invasion. Some local outbreaks occurred in the spring of 1909, and investigations have shown that the farmer can do much to protect himself by preventing the growth of volunteer grain in fields intended for fall wheat or oats, and by delaying the sowing of these crops as late in the fall as possible, the object being to prevent the pest from becoming established in the fields until as late a date in the fall as possible.

Careful studies in the Northwest of the damage by the wheat straw worm indicate that its injuries can be prevented by cultural methods, namely, by rotation of crops, clean, early summer fallow, and the temporary abandoning of spring-wheat culture in the infested regions. Studies of the true joint

worm in Ohio, Indiana, and Illinois, where a serious outbreak has occurred, indicate that late seeding of wheat, in connection with rotation of crops, tends to reduce its injuries.

The wheat-sowing experiments started in Kansas in 1907 have resulted in the gaining of information whereby a threatened outbreak in 1909 was practically avoided, owing to a campaign of late sowing based on these results, instituted and followed up by the state experiment station, the agricultural press, and millers, grain dealers, and, in one instance, by a church organization. It is estimated that the wheat-sowing experiments in Kansas resulted this year in the saving of \$500,000 or more.

The Bureau of Statistics, finally (to pass over the report on experiment station work), is one of the most interesting functions of the Agricultural Department; and at the risk of repeating what is to many quite well known, the Secretary's statement of this branch of the service may be repeated here. The Report says:

During the year substantial progress has been made in strengthening the organization of the Bureau, perfecting its methods, extending its operations, and conducting special investigations.

The principal lines of work carried on in the Bureau of Statistics may be stated as follows:

1. Gathering and digesting statistical data in regard to crop conditions, with monthly publication of results.

2. Gathering and digesting information in regard to domestic production of crops and farm animals, with annual publication of results.

3. Studies of the import and export trade of the United States in agricultural and forest products, with annual publication of results.

4. Studies of agricultural production in foreign countries and their export and import trade in such products, with compilations published annually.

5. Special studies and investigations of (a) agricultural production in the United States over long periods; (b) the foreign production of certain crops over long periods; (c) foreign markets for the agricultural surplus of the United States; (d) problems relating to the transportation of farm products within the United States and across the seas; and (e) various important phases of agricultural industry and rural life.

The work under the first two heads—the investigation of crop conditions during the year, and of annual production—is by far the most important, as it is through such work that this Department exercises an important influence on commerce by giving to the world advance information concerning its food supply. Without doubt the statistical data collected and published by this Department give stability to our markets, tend to prevent market manipulators from causing undue fluctuations in prices, and thereby aid the American farmer toward securing just and fair returns for the products of his labor and his invested capital. It should also be added that it is in these two fields of official endeavor that our statisticians secure the original data which form the basis of later and larger studies.

During the year the work of the Bureau was pushed vigorously and successfully along all the lines indicated above.

CROP-REPORTING SERVICE.

In its efforts to secure accurate first-hand information concerning crop conditions, acreage, and yields the Department has perfected an organization which practically covers the entire country four times. There is, first, a corps of township correspondents, at present numbering about 33,000. These report directly to the Bureau for their respective localities. Second, there is a corps of county correspondents who report directly to the Bureau, there being one in practically every one of the 2,800 agricultural counties of the United States. Each of these correspondents usually has two or more assistants located in different parts of the county who report to him. Third, there is a state statistical agent in each State, who has a large corps of local correspondents reporting to him. He not only tabulates these returns, but makes personal observations and reports monthly to the Bureau. Fourth, there is a corps of special agents, each an expert statistician, traveling over a definite area, making personal investigations and securing information from a variety of sources, and reporting directly to the Bureau. Here, then, we have what might be termed a quadruplication of original research which is practically continuous throughout the year. Besides the special agents and state agent who receives salaries, there are in all about 135,000 voluntary correspondents, mostly farmers, who serve the Department with no compensation other than a limited number of publications and a small supply of seeds. This number includes about 25,000 representative farmers who are called upon at the close of each crop season for a report based on results of their individual farming operations. In addition to the foregoing, there are special lists of cotton, rice, and tobacco correspondents from whom data relating to these crops are secured; and sup-

plementary data regarding wheat and cotton yields are secured, respectively, from millers and cotton ginnerers.

The Bureau secures its original data mainly by sending out blank forms or "schedules" to be filled and returned by correspondents of the several classes. During the fiscal year 1909, 1,509,000 copies of these blanks were sent out. A greater percentage of these were filled out and returned than in any previous year. Of the county reports, 76 per cent were returned, as compared with 74 per cent in 1908. The percentage of schedules filled and returned by township correspondents in 1906 was only 48 per cent. By 1908 it had increased to 63 per cent, and during the last year it was 66½ per cent. This shows gratifying progress in perfecting the Bureau's organization and increasing interest and appreciation on the part of the farmers.

The reports from each class of voluntary correspondents are tabulated and computed separately, and the data from all the original sources are handled by the crop-reporting board, composed of the Statistician, the Assistant Statistician, one expert statistician in the Bureau, and two special or state agents called to Washington for this service. The reports derived from the data secured from each original source are taken in hand by the members of this board individually at first and then all act together in arriving at the general average of results. This year, as during several preceding years, this board has done its work under regulations and safeguards which make it impossible for advance information concerning the final figures to be secured by any means, and public confidence in the efficacy of the methods and the honesty of the service appears to be perfectly established.

By the organization and methods just described this Department arrives at an estimate of the crop prospects at the end of each month with the accuracy and reliability of which it is believed no similar estimate made by private agencies can approach.

A number of important special investigations are in progress in that branch of the Bureau known as the division of production and distribution. Among these may be mentioned the study of transportation problems; investigations of the supply and demand for wheat and meat products; the study of foreign markets in general; studies of the cost of producing various crops; the collection of data in regard to co-operation among farmers in selling and buying, fire and live-stock insurance, telephone service, etc.; and an inquiry concerning the dates of planting and harvesting a large list of crops in different sections of the United States. On some of these lines of investigation important papers have already been published, and on others publications will be issued as the progress of the work justifies.

ROSENBAUMS LEAVE SIOUX CITY.

The Interstate Grain Co. (Rosenbaum interests) on December 1 shut down the elevator operated at Sioux City, Iowa, and announced that the company would close its offices and withdraw from that city. The manager, Chas. Flanley, explained:

"The Interstate Grain Company cannot agree with the policy that the railroads have adopted towards Sioux City and the citizens of Sioux City seem unable to obtain the same rights for their market as received by other cities."

The Sioux City Terminal Elevator Company was organized more than two years ago by local men and the terminal elevator was built at a cost of about \$107,000. John Hornik is president of the company, H. J. Hutton, vice president; S. J. Johnson, secretary, and L. L. Kellogg, treasurer. A first mortgage bond for \$50,000 at 5 per cent interest was placed on the elevator and a portion of the half-block of ground upon which it was built. In order to complete payments to the contractor it was necessary to place another mortgage of \$11,000 on the entire property, including that portion of the ground not included in the first mortgage.

The elevator property was leased to the J. Rosenbaum Grain Company, of Chicago, at an annual rental of \$6,150, this being 6 per cent on \$102,500, which was the amount agreed upon as the estimated cost of the elevator. The lease of the Rosenbaum Company, under which the Interstate Company has operated the elevator, is for a period of five years beginning December 1, 1907. The building is insured for \$50,000 against wind and for \$65,000 against fire.

The receipts of the Kansas grain inspection department for October were \$2,744.47, fees on 4,249 cars of grain imported and 2,573 weighed.

THE COLOR OF THE CORN.

'Tween rivers broad and bountiful,
With gently rising crest,
Stands Iowa, "The Beautiful!"
A daughter of the west.
Her uplands teem with fruitful yield,
And radiant as the morn
Her garniture—in autumn field—
Of shining rows of corn.

The waving corn,
The tasseled corn,
The ripened, yellow corn,
The matchless corn,
The mammoth corn,
The full-eared, golden corn!

Yes, Corn is King! by public voice,
All praise it, as is due;
But Iowa has other source
For thrift, and honor, too.
The commonwealth is rich in men,
Of fine, heroic mold;
A type of loyal citizen,
Whose heart is pure as gold.

Iowans bold,
Of worth untold,
To truth and freedom born;
The Hawkeye state
Has statesmen great,
And proudly "owns the corn!"

And women fair, beyond compare,
The Hawkeye state can boast,
And rising youth—to do and dare—
Who greet you with this toast:
"Corn growers all, we share with pride
Your conquest of the soil;
May heaven bless your lives, no less
Than it has crowned your toil;

In onward march,
Iowa's arch
Shall glow with glistening corn;
Her loyal pledge,
A golden badge—
The color of the corn!"

—Addie B. Billington, in Des Moines Register-Leader.

COMMUNICATED

[We invite correspondence from everyone in any way interested in the grain trade on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

NEW HAY ASSOCIATION WORK.

Editor American Elevator and Grain Trade:—The National Hay Association is now working out a plan of inspection to be tried out in some terminal market, whereby this Association will have direct control and supervision over the grading and inspection of hay, according to our association rules for grading and inspection. I am not in a position at this time to give you anything definite, but hope to be able to do so in the near future. If this plan can be carried out it will certainly mean great things for our organization.

Yours very truly,

J. VINING TAYLOR,

Winchester, Ind.

Sec.-Treas.

NEW MILL ELEVATOR.

Editor American Elevator and Grain Trade:—We have just closed the contract with Mr. R. L. Isbill of Vonore, Tenn., for the erection of a crib elevator and warehouse. The elevator will consist of eight bins holding 1,500 bushels each and the warehouse will be sufficient to store 12,000 bushels of grain in sacks. Mr. Isbill's experience in this kind of work is quite extensive. He will complete the work at once.

All the necessary machinery will be furnished and installed by a machinery company at Knoxville.

Yours very truly,

VONORE FLOURING MILLS.

Vonore, Monroe Co., Tenn.

UNFAIR TREATMENT OF A KANSAS COMPANY.

Editor American Elevator and Grain Trade:—There is an old saying that a man who strives to pull himself up by pulling his neighbor down will eventually find that such conduct acts like a boomerang and in the end works greater injury to himself than to anyone else.

A few months ago the travelling representative of one of our latest competitors circulated the re-

port that The Bennett Commission Company were out of the grain business, but it was false; and now in the last issues of some of the grain and flour trades journals we notice that someone has "broken loose" and sent information, so-called, to the same effect, which is also untrue.

We are still in the grain business, and we expect to remain in the grain business as long as we can handle it successfully, which we hope and trust will be as long as we care to be in business of any kind.

Will you, therefore, kindly aid in correcting these false reports by publishing this letter in your next issue.

Yours very truly,

THE BENNETT COMMISSION CO.

Topeka, Kansas.

TERMINAL CONDITIONS AT NEW ORLEANS.

Editor American Elevator and Grain Trade:—Having been to New Orleans in the interest of the Illinois Grain Dealers' Association, it would perhaps be of interest to the trade to know something of terminal conditions in that market.

The terminal facilities of New Orleans are unexcelled in any port of the country. Elevators with a capacity of 2,000,000 bushels; docks to load ten ocean-going vessels at one time; extensive yards of tracks, and adequate driers, make a complete whole of equipment. Perfect cleanliness and order were apparent everywhere.

New Orleans has not adopted the Uniform Grades promulgated by the Grain Dealers' National Association. There is no appreciable demand in that market for low grade corn. All corn grading under No. 3 has to be conditioned by drying; and they follow the usual methods of drying, extracting sufficient percentage of moisture to make the grain carry for export. The understanding in New Orleans seems to be that natural corn exported will carry a greater per cent of moisture than dried corn; consequently, corn which shows a large percentage of moisture is dried to such a condition as experience has demonstrated is necessary to make it safe as an export product. This is sometimes quite expensive to a country shipper who has taken a chance on New Orleans grading.

New Orleans' charges for inspection and weighing are only 75c per car, but a dockage is taken of two pounds per thousand, which is one bushel for every five hundred. This is deducted from the car weight, and as sales are made under the present custom, it is taken from the shipper. No report of the condition of cars on arrival is made to the shipper by the Inspection Department (although the investigation of the car is made by the Inspector and kept on record in the Department) unless the shipper makes a request for such information. Every dealer who ships to New Orleans should ask the Chief Inspector for a certificate showing the condition of the car on arrival.

In a conference with the grain committee of the Board of Trade, all matters affecting the trade were very fully discussed. Opportunity was given for examination and investigation of all the methods and practices of the market. Every courtesy was extended, and there were frequent remarks by those present that such meetings and discussions were beneficial to the trade generally.

On returning from the South a day was spent at St. Louis. Illinois corn was grading finely, about 85 per cent grading No. 3 or better.

East St. Louis has adopted the Uniform Grades. Gradually the uniform rules are prevailing, and soon they will be the governing rules for all markets.

The St. Louis Merchants' Exchange is making earnest efforts to mend some of the charges at that market. The matter of team-track charges has been a source of annoyance to Illinois shippers for a good while, and that there may be relief therefrom is welcome news.

Yours truly,

S. W. STRONG, Secretary.

Pontiac, Illinois.

Farmers in Lincoln County, in southeastern Mississippi, have pledged 732 acres to be planted to oats next spring.

[Bureau of Plant Industry—Circular No. 43.]

THE DETERIORATION OF CORN IN STORAGE.*

BY J. W. T. DUVEL,

Assistant in Charge of Laboratory Methods, Grain Standardization.

In February, 1909, special investigations were begun at Baltimore, Md., in cooperation with the Baltimore & Ohio Railroad Company, for the purpose of obtaining definite information regarding the deterioration of shelled corn in elevator bins and in grain cars. The first series of experiments in these investigations comprised tests with (1) 5,550 bushels of corn stored in a 65-foot elevator bin for 69 days, until the corn at the top of the bin had become badly damaged; (2) 900 bushels of dried damaged corn from the top of the bin loaded into car No. 67031 and held on the track for an additional 37 days, and (3) 900 bushels of the best cool corn from the same bin loaded into car No. 75197 and held on the track with the car containing the dried damaged corn.

In this preliminary report no attempt has been made to generalize the results of the experiments, to draw any definite conclusions, or even to give any extended expression of opinion. The aim has been to outline the conditions under which this first series of experiments was made and to give a brief summary of the results obtained, leaving the individual reader to formulate his own theories until the investigations are more advanced. It is hoped, however, that this preliminary report will provoke discussion and bring about a better understanding of the purpose and value of investigations of this character.

CORN STORED IN ELEVATOR BIN.

On February 17 and 18, 1909, 5,550 bushels of shelled corn were stored in a 65-foot bin in elevator C of the Baltimore & Ohio Railroad Company at Baltimore (Locust Point), Md. This corn was left without "running" until April 27, 1909, at which time the fermentation at the top of the bin had progressed so that the corn was hot and sour, the temperature 8 inches below the surface having reached 133 deg. F.

The corn used in these experiments was taken from cars selected from those received at Baltimore, Md., on February 16, 1909. So far as the records available show, 4,050 bushels of this corn were grown in the Dakotas, the remaining 1,500 bushels having originated in Illinois. The 3,050 bushels first run into the bin consisted of practically all Dakota corn. The next draft of 500 bushels was Illinois corn with a small admixture of Dakota corn. The 1,000 bushels following consisted of Illinois corn, while the 1,000 bushels in the tenth and eleventh drafts at the top of the bin were composed of corn from the Dakotas.

In filling the bin each draft consisted of 500 bushels, with the exception of the first 50 bushels at the bottom of the bin. After almost every draft, samples were taken with a 4-foot grain trier, one from the center and one from near each corner of the bin, and the different factors representing the quality and condition of the corn were determined for each sample. The average results of the analyses of the samples representing the different drafts are given in Table I. These results show the moisture content; weight per bushel; weight of 1,000 kernels; sound corn; damaged grains; other grains; weeds, cobs, dirt, etc.; badly broken corn; and germination of whole kernels. A comparison of Table I with Figure 1 will show the exact location of the corn in the bin represented by each set of averages given in the table.

TABLE I.—Average condition and quality of the 5,550 bushels of corn at the beginning of the experiment, as shown by the analyses of samples taken with a 4-foot grain trier after the different drafts were emptied into the bin.

No. of draft.	Amount of draft.	Moisture content.	Weight per bushel.	Weight of 1,000 kernels.	Sound corn.	Damaged grains.	Other grains.	Weeds, cobs, dirt, etc.	Badly broken corn.	Germination of whole kernels.
	Bu.	P. ct.	Lbs.	Grams.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.	P. ct.
(Bottom).....	50	17.8	53.5	280	97.9	0.8	0.5	0.8	2.4	.....
1.....	500	17.9	53.8	284	97.6	1.0	0.9	0.9	3.1	.....
2.....	500	17.8	53.6	337	97.4	1.5	1.2	0.9	3.3	81.3
3.....	500	17.9	53.3	295	98.9	1.4	0.9	0.8	2.0	72.9
4.....	500	18.0	52.6	303	96.2	2.5	4	0.9	3.5	73.9
5.....	500	17.8	53.6	296	96.6	2.2	4	0.8	3.3	77.3
6.....	500	18.8	53.0	285	97.7	1.8	1	0.4	1.4	69.0
7.....	500	17.5	54.5	317	97.6	1.3	0.5	0.6	3.5	87.8
8 and 9.....	1 000	17.0	55.0	330	96.9	1.7	.....	2.4	5.4	95.0
10.....	500	18.6	53.3	272	96.3	1.4	1.1	1.2	3.9	71.8
11.....	500	18.3	52.8	279	96.6	1.6	0.9	0.9	3.7	73.0
Average.....		17.8	53.7	301	97.0	1.4	0.6	1.0	3.0	80.6

*All figures in the table other than those in the first two columns represent averages, so that the final average of all the corn in the bin is based on a total of 49 samples, or 1 sample for approximately every 130 bushels of corn emptied into the bin.

As will be seen from the table, the average moisture content of the corn in the different drafts varied from 17 per cent in the eighth and ninth to 18.8 per cent in the sixth draft, with an average of 17.8 per cent for all of the corn in the bin. The

*This opportunity is taken to acknowledge the cordial co-operation of the Baltimore & Ohio Railroad Company and the Baltimore Chamber of Commerce, through its grain-inspection department. Special thanks are due to the various men assigned for duty at the elevator, who willingly rendered every possible assistance while these experiments were in progress.—B. T. Galloway, Chief of Bureau.

†The bin in which the corn was stored is near the center of the outer row of bins on the east side of the elevator, the outer 6-inch wooden wall of the bin being built against the heavy brick construction of the elevator.

weight per hushel varied from 52.6 pounds in the fourth draft to 55 pounds in the eighth and ninth, with a total average of 53.7 pounds. Similar variations are shown in the other factors, most of which indicate that the corn of the highest quality and in the best condition was the Illinois corn contained in the eighth and ninth drafts.

NOTES ON THE TEMPERATURE AND THE CONDITION OF THE CORN WHILE IN THE BIN.

The bin used in this experiment was previously equipped with thirteen electrical resistance thermometers, so that temperature records of the corn in various parts of the bin could be taken at any time during the course of the experiment. Thermometer No. 1 was about 3½ feet from the bottom, near the center of the hopper. The other thermometers were distributed through the center of the corn, approximately 3½ feet apart, except that in the corn near the top of the bin, where deterioration is most likely to begin, additional thermometers were placed at various points. Figure 1 shows the location of these thermometers, numbered from 1 to 7 and from A to E, inclusive. In this same diagram are also shown the number of bushels con-

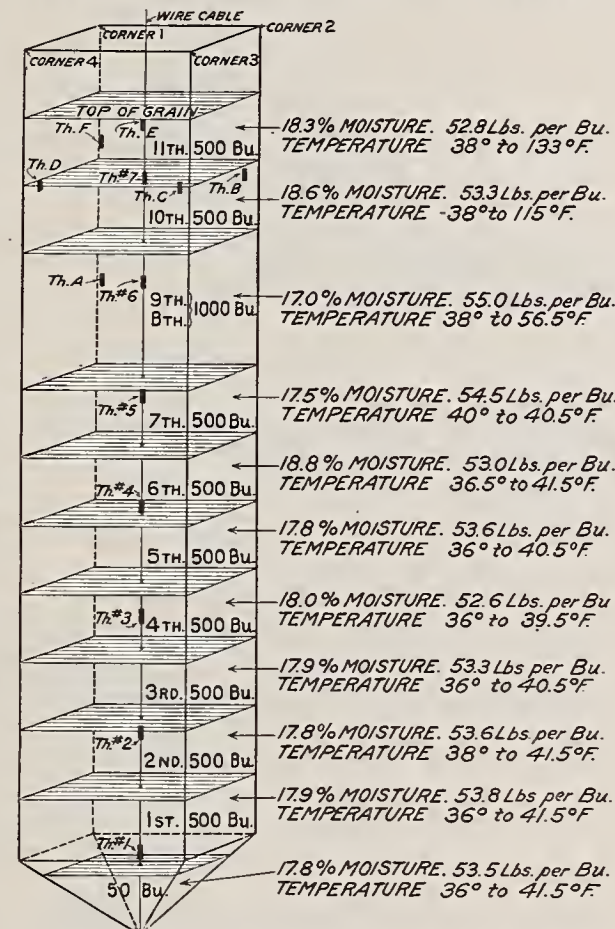


FIG. 1.—Diagram showing the position of the thermometers; the number of bushels, the moisture content, and the weight per bushel for each draft; and the temperature of the corn at the beginning and at the end of the experiment.

tained in each draft, the average moisture content and the weight per bushel of the corn in the various parts of the bin at the time of filling, the temperature of the corn immediately after the bin was filled, and the maximum temperature of the corn at the end of the experiment, which extended over a period of 69 days.

The temperature of the corn immediately after the bin was filled varied from 36 to 40 deg. F. As the bin was being filled the atmosphere was clear and dry, the relative humidity being 48 per cent. The temperature of the air in the elevator varied from 36 to 39½ deg. F. While the corn was in storage, temperature readings were made every two or three days until April 22, when the corn at the top of the bin gave evidence of very rapid deterioration, necessitating frequent readings during the remaining five days of the test.

The first indication that the corn had begun to deteriorate was on the 26th day of March, after it had been in storage 37 days, at which time a slight sour odor was perceptible in the corn at the top of the bin, showing that fermentation had begun. The highest temperature recorded at this time was 42 deg. F., by thermometer C, approximately 5 feet below the surface of the corn. From this time on the increase in the temperature of the 500 bushels of corn at the top of the bin became more pronounced. However, 27 days later, on April 22, the highest temperature recorded was still less than 70 deg. F., but during the 5 days immediately following a maximum of 133 deg. F. was reached, 8 inches below the surface of the grain.

On March 31 three holes were bored through the wall of the bin on the side nearest the interior of the house. One hole was bored approximately 10 feet from the bottom, another 25 feet from the bottom, and the third 40 feet from the bottom of the bin, or 20 feet from the top of the grain. Samples taken through these holes with a 4-foot grain trier showed that the corn had not changed materially since it was first placed in the bin, no unnatural odors being perceptible. On the same date samples

taken with a long grain trier from 7 feet below the surface showed the corn at that point to be slightly musty.

Samples taken on April 3 from 3, 7 and 12 feet below the surface showed more pronounced odors in the corn at 3 and 7 feet, but no odor could be detected in the samples taken at 12 feet. At this time the maximum temperature of the corn 12 feet below the surface was 42 deg. F. The highest temperature in the upper 500 bushels was 45½ deg. F. On April 6 the corn near the top of the bin was very musty, although the maximum temperature was only 48 deg. F. On April 13, samples were again taken from 12 feet below the surface but revealed no odors indicating deterioration.

On April 19 the maximum temperature in the 500 bushels of corn at the top of the bin was 61½ deg. F., as registered by thermometer E, 8 inches below the surface. The corn near the top at this time was very musty and a considerable quantity of fresh mold was growing on the kernels. The temperature of the corn 12 feet below the surface, as registered by thermometer A, was 56 deg. F., which was within one-half degree of the highest temperature recorded at that depth during the entire test.

On April 26, samples were again taken through the holes in the side of the bin at 15, 25 and 40 feet from the bottom, together with a number of samples representing the 1,000 bushels at the top of the bin. At this time the corn at the top of the bin was hot, musty and sour, but no odor could be detected on the samples taken through the hole 10 feet from the bottom of the bin. However, the samples taken through the holes 25 and 40 feet from the bottom of the bin showed that the corn near the bin walls at those points was slightly sour. This condition was shown more clearly when the bin was emptied the following day, the corn having a tendency to adhere to the sides. In emptying the bin the corn from the sides became unevenly mixed with the better corn from the interior, so that an odor was perceptible on a considerable portion of the entire bulk.

The fermentation in the upper 500 bushels of corn was very active at this time and the temperature was increasing rapidly. On April 25 thermometer No. 7, in the center about 5 feet beneath the surface of the corn, registered 87 deg. F. At 8 o'clock the following morning this same thermometer registered 102 deg.; at 11:45 a. m., 105 deg.; at 3:10 p. m., 107 deg., and at 9 o'clock the morning of the 27th, 115 deg., an increase of 28 deg. F. in 48 hours. The highest temperature registered on April 27 was 133 deg. F., in corner No. 4, 8 inches below the surface of the corn. In corner No. 1, 14 inches below the surface, the temperature was 110 deg.; in corner No. 2, 112 deg.; in corner No. 3, 125 deg.; and in corner No. 4, 132½ deg. Thermometer B, in corner No. 2, the same depth below the surface as thermometer No. 7, registered 71.5 deg. F.

A clearer understanding of these conditions will be had by consulting figure 2, which shows the temperature of the corn in various parts of the bin, together with the daily maximum and minimum air temperature, and the general character of the precipitation during the 59 days covered by the experiment.

CONDITION OF THE CORN AT THE END OF THE EXPERIMENT.

As shown in figure 2, the only marked increase in temperature was in the 6 or 7 feet of corn at the top of the bin. The maximum temperature registered by thermometers No. 6 and A, approximately 12 feet below the surface, was 51 and 56½ deg. F., respectively. The temperature of the corn in the lower part of the bin varied from 39½ to 41½ deg. F., as compared with a variation of from 36 to 40 deg. F. at the beginning of the experiment.

The moisture content of the corn immediately at the surface was 14.95 per cent, or 3.35 per cent less than on February 17. The moisture content of the 1,000 bushels at the top of the bin, exclusive of the corn on the surface, was slightly higher than when the corn was placed in the bin, showing that the deterioration of the corn was resulting in the formation of more water than was being given off by evaporation. The weight per bushel of the surface corn was 54 pounds, while the weight of the remainder of the upper 1,000 bushels had decreased from 53 to 51 pounds.

The germination of the poorest corn from the top of the bin varied from 0 to 17 per cent, with an average of 10.3 per cent, as compared with an average of 72.4 per cent on February 17. This corn was damaged so that many of the germs were badly discolored. The average germination of the 1,070 bushels taken from the top of the bin for further experiment, which included not only the hot corn but all that had a temperature over 50 deg. F., was 42.6 per cent after being handled, dried, and loaded into car No. 67031.

The corn in the lower 45 feet of the bin, except 900 bushels of the best quality which was loaded into car No. 75197 for further test, after being handled over three elevators and dried to 14.87 per cent of moisture, was given a grade of "mixed corn." The germination of this corn was 80.8 per cent at the beginning of the experiment, 71.4 per

cent when drawn from the bin, and 81.4 per cent after being handled and dried.

The total loss in weight, as shown by the certificates furnished by the weighman of the Chamber of Commerce, resulting from filling and emptying the bin and the evaporation during the 69 days in storage, amounted to 310 pounds, or slightly less than one-tenth of 1 per cent.

DRIED DAMAGED CORN FROM TOP OF BIN STORED IN CAR.

The 1,070 bushels of corn drawn from the top of the bin was weighed, handled over three elevators, and reweighed, after which it was artificially dried

els of dried damaged corn from the top of the bin. The temperature of this corn while still in the bin varied from 40 to 42 deg. F., but in "running" from the bin, elevating to the scale, and loading into the car, the temperature was increased so that the temperature of the corn after being loaded was 48 deg. F. The air temperature at this time was 51 deg. F. and the relative humidity of the atmosphere 76 per cent. The average moisture content of this car of corn was 17.5 per cent, and the weight per bushel was 55.3 pounds.

On May 20, after standing on the track 23 days,

car was again hot, the maximum temperature being 112 deg. F., showing that hot corn is not made safe for shipment when cooled simply by handling.

Figure 3 shows the changes in temperature in both the car of undried corn and the car of dried damaged corn while on the track from April 27 to May 25 and from May 25 to June 3, together with the daily maximum air temperature and the weather record for the same period. The diagram also shows that only the corn near the surface was influenced by the temperature of the outside air.

LOSS IN MOISTURE AND SHRINKAGE.

When the undried corn from the bin was first loaded into car No. 75197, on April 27, the average moisture content was 17.47 per cent. On May 25, when the maximum temperature of the corn was 122 deg. F., the average moisture content of the surface corn was 13.55 per cent. Samples taken from 5 inches below the surface showed a moisture content of 17 per cent. The highest moisture content found was 17.5 per cent, in samples taken at the point where the temperature was 122 deg. F.

The shrinkage in weight in the layer of corn at the surface, based on the reduction in moisture of 3.92 per cent, was 4.53 per cent. On May 25 this corn was unloaded and reweighed by the weighman of the Chamber of Commerce on the scales regularly used at the elevator. The loss in weight in the loading and unloading and through evaporation while in the car from April 27 to May 25 was 367 pounds, or 0.728 of 1 per cent. This corn was then handled over five elevators, screened, weighed and reloaded. In this handling and reloading the moisture content was reduced to 16.55 per cent, or 0.92 of 1 per cent less than when the corn was first loaded into the car on April 27, which is equivalent to a loss in weight of 1.1 per cent due to the evaporation of moisture while in the car and in the handling of the hot corn in the elevator. On June 3, this car of corn, cooled by handling, was again hot, the temperature having increased from 73 deg. F. to 112 deg. F. from May 25 to June 3. The average moisture content of the surface corn was only 13.95 per cent, as compared with 16.55 per cent when reloaded, a reduction in moisture of 2.6 per cent in nine days.

The low moisture content of the surface corn showed that water was being lost by evaporation and that this evaporation is quite rapid when the temperature of the corn is relatively high. It must be remembered, however, that this car was opened frequently and the corn on the surface more or less disturbed in the securing of samples, in reading temperatures, etc., so that the same results might not apply in the same degree to corn in

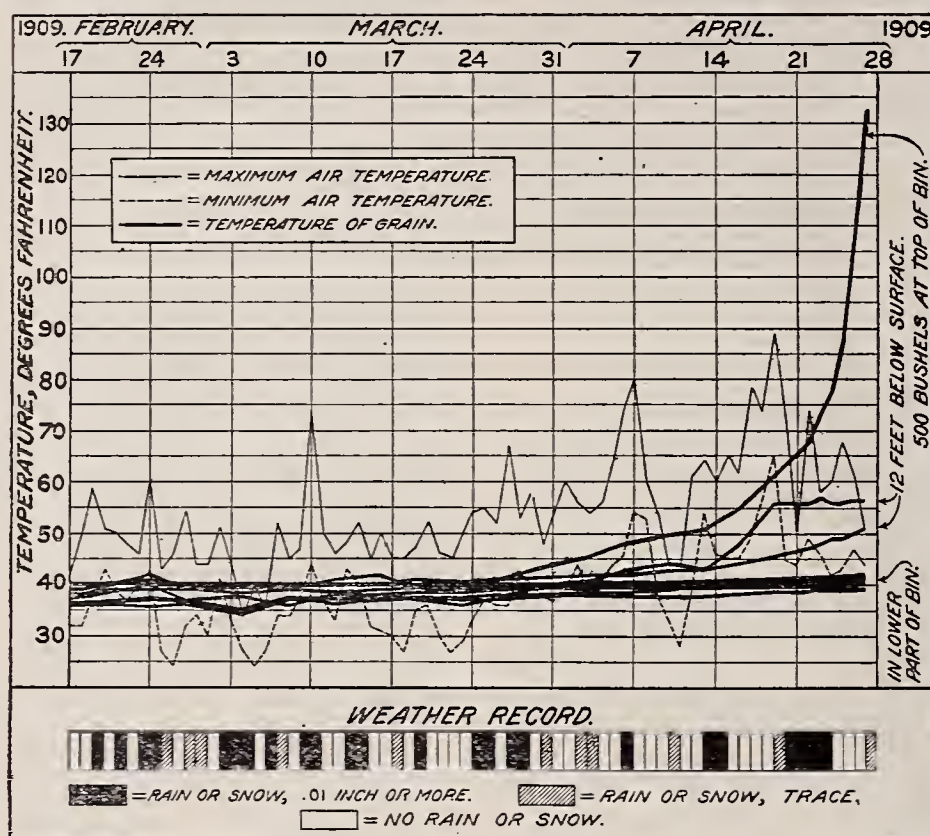


Fig. 2.—Diagram showing the temperature of the corn in various parts of the bin, the daily maximum and minimum air temperature, and the precipitation from February 17 to April 27, 1909.

in a grain dried at a temperature varying from 151 to 163 deg. F. The average moisture content of this corn as taken from the bin was 18.64 per cent. The average moisture content when emptied into the drier was 18.30 per cent, or a reduction of 0.34 of 1 per cent as a result of the handling, which is equivalent to a loss in weight of 0.4 of 1 per cent.* In drying, the moisture content was reduced from 18.3 per cent to 14.57 per cent, a reduction of 3.73 per cent, which is equivalent to a loss in weight of 4.44 per cent.

After this corn was dried and thoroughly cooled, 900 bushels, having an average moisture content of 14.57 per cent, were loaded into car No. 67031 as if intended for shipment. The car was run out into the yard and left standing on the track fully exposed to all atmospheric changes. The temperature of this corn immediately after it was loaded into the car, after drying and cooling, on April 27, varied from 57 to 58 deg. F. Frequent temperature readings were made up to and including May 35, when the highest temperature at any point in the corn was 66 deg. F., an increase of only 8 or 9 degrees, although the temperature of the air in the car had varied from 56 to 82 deg. F. and the temperature of the air outside of the car from 41 to 90 deg. F. On May 25, after being in the car 28 days without any noticeable change in condition, the corn was unloaded, elevated and weighed, and then returned to the car and left an additional nine days on the track. The air temperature at this time was 73 deg. F., resulting in a very slight increase in the temperature of the corn by the time it was returned to the car.

On June 3 the temperature of the corn was 67 deg. F., an increase of only 10 degrees during the entire 37 days that this corn was in the car. The condition of the corn was fully as good if not better than when it was placed in the car on April 27, although the odor resulting from the fermentation of the corn while in the bin had not entirely disappeared.

On June 3 the moisture content of the corn on the surface was 13.1 per cent, with 14.48 per cent for the remainder of the corn in the car, a difference of 1.3 per cent in the moisture content, which is equivalent to a shrinkage in weight in the surface corn of 1.59 per cent in 9 days from May 25 to June 3.

UNDRIED CORN FROM BIN STORED IN CAR.

In order to secure data for comparison, 900 bushels of the best cool corn from the bin, principally the Illinois corn from the eighth and ninth drafts, were loaded into car No. 75197 and placed on the track alongside of the car containing the 900 bush-

els of dried damaged corn from the top of the bin. The temperature of this corn while still in the bin varied from 40 to 42 deg. F., but in "running" from the bin, elevating to the scale, and loading into the car, the temperature was increased so that the temperature of the corn after being loaded was 48 deg. F. The air temperature at this time was 51 deg. F. and the relative humidity of the atmosphere 76 per cent. The average moisture content of this car of corn was 17.5 per cent, and the weight per bushel was 55.3 pounds.

On May 20, after standing on the track 23 days,

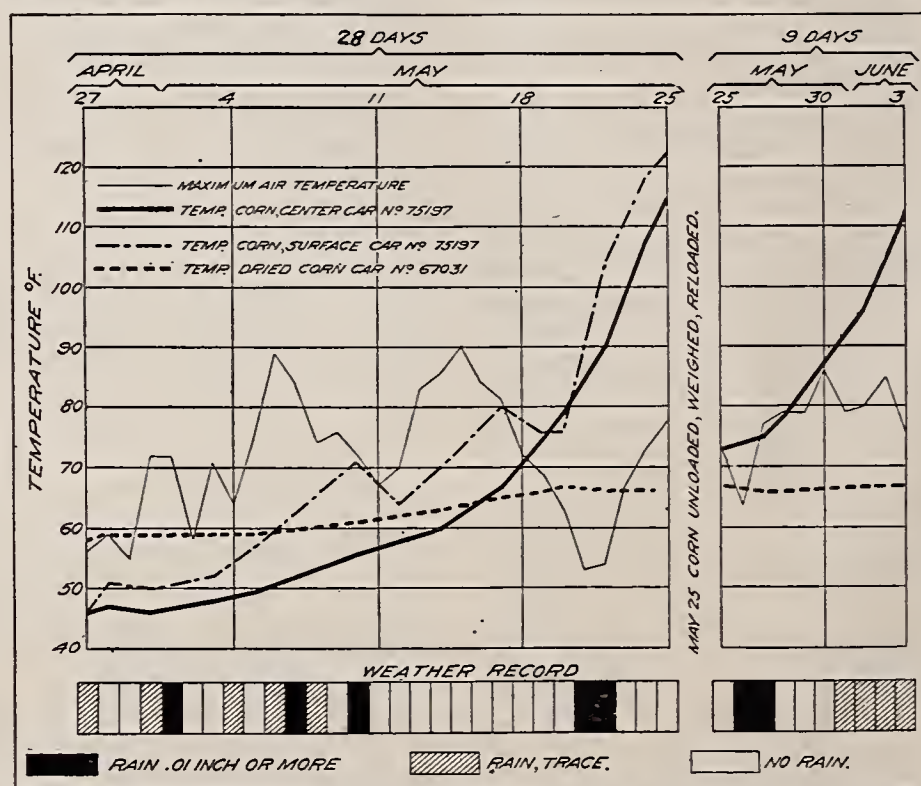


Fig. 3.—Diagram showing the temperature of the undried corn in car No. 75197 and of the dried damaged corn in car No. 67031; the daily maximum air temperature; and the weather record from April 27 to June 3, 1909, while these cars were on the track in the Baltimore and Ohio elevator yards.

brake end of the car, approximately 6 inches below the surface of the corn. The average weight per bushel had decreased from 55.3 pounds to 52.6 pounds. The moisture content varied from 13.6 per cent in the corn at the surface to 17.5 per cent where the temperature was 122 deg. F., as compared with a variation of from 17 per cent to 17.7 per cent at the time the corn was loaded into the car.

On May 25 this corn was unloaded, weighed, handled over five elevators, reweighed, screened, weighed a third time, and returned to the car for further observation. When the corn was returned to the car the second time (May 25) the temperature was 73 deg. F., approximately the same as the temperature of the air at the time the corn was handled. On June 3, nine days later, the corn in this

transit where the cars are unopened from point of shipment to destination.

Broom corn of fine quality has sold as high as \$200 a ton in Kansas this fall and winter, and average Oklahoma commands \$125 and upwards.

The University of Kansas has published a pamphlet entitled, "The Green Bug and Its Natural Enemies," the funds to cover the expense having been contributed by Kansas grain men, millers and farmers. There are many helpful illustrations to supplement the text to enable the farmer to tell this injurious insect from the less harmful though closely resembling ones found in wheat fields and to destroy it.

*Circular 32, Bureau of Plant Industry, U. S. Dept. of Agriculture, entitled "Moisture Content and Shrinkage in Grain," explains why this difference exists and how it is calculated.

ASSOCIATIONS

Sec'y Strong has issued the seventeenth annual "Directory of the Grain Dealers of Illinois."

The Texas Association's arbitration committee will meet in Fort Worth on December 21 for the disposition of cases before it.

The annual meeting of the Indiana Grain Dealers' Association will be held at the Claypool, Indianapolis, on January 11 and 12.

"Your paper is one of the best grain journals published and is very interesting reading for any one interested in grain and the grain trade."—Arthur G. Roesser.

Sec'y M. J. Dillen of the Indiana Association has issued his "Official Directory of Regular Grain Shippers of Indiana," corrected to November 1, 1909. The price is \$1.

John F. Courcier, secretary of the Grain Dealers' National Association, has published and is circulating widely the "Grades of Grain" as adopted by the Association at the Indianapolis Convention on October 8.

Sec'y G. J. Gibbs announces that N. W. Smith of Cleburne has been elected a member of the Texas Grain Dealers' Association; and that a new list of the membership of that body will be in print by January 1, 1910.

Minneapolis grain merchants on November 17 formed an association for the purpose of sending out price cards to independent shippers and elevators. B. F. Benson was chosen president and J. J. Quinn secretary.

The following names should be added to the list of members in good standing of the National Hay Association: Hankins Bros., Elsie, Mich.; Missouri Commission Co., St. Louis; E. E. Strayer, Bryan, Ohio; B. M. Stiteler, Johnstown, Pa.

Michigan bean and grain dealers in the Grand Rapids district met at the Pantlind on November 11 and after dinner discussed conditions and prospects. The district extends north to Howard City and east to Ionia, and some 40 or 50 dealers attended the meeting.

The annual meeting and election of the Retail Feed and Grain Dealers' Association of Philadelphia was held on November 10 in the Bourse Building. S. J. Shaunce was re-elected president. Other officers elected were: Vice-president, E. S. Schaal; corresponding secretary, R. L. Nerlinger; treasurer, George B. Moore; financial secretary, George J. Craig; attorney, A. S. Daix; directors, E. L. Shute, C. B. Wilson, C. B. Horner, W. H. Donoghue, James F. Hause, James F. Connor, George R. Walton.

Secretary Smiley reports the following applications to the Kansas Association as secured during the month of November: T. J. Pace, Sabetha; Hutchison Grain Co., Oak Hill; J. R. Williamson Grain Co., Wichita; Blair Elevator Co., Atchison; McCarty & Bowers, Bronson; Love Grain & Hay Co., Bronson; B. Strong Grain & Coal Co., Conway Springs; C. M. Linn, Humboldt, Neb., operating elevators on the St. Frances Branch of the B. & M. in Kansas; W. C. Peterson, Reserve, suc. Jones Grain Co.; Stark Grain & Coal Co., Stark; Geiger Grain Co., Robinson, suc. H. R. Melendy.

Sec'y J. Vining Taylor of the National Hay Association writes his members as follows: "Should you know of any firm or individual not doing business on the square, advise me at once, so I can post the members accordingly. This is one of the features that I am trying to lay particular stress on, and which I believe will be of great benefit to our members. Please send me the names of a few reputable hay merchants, whom you think I could interest in this organization. As soon as this information is received from your office, I will take the matter up in person and endeavor to secure their application. Now that the annual report has been received in your office, I feel that we should all buckle down to business and try and secure the one thousand membership before our next convention."

W. L. Beaton, of Minneapolis, secretary of the Tri-State Grain Dealers' Association, has added his endorsement of a recommendation by H. O. Brown and J. T. Clifford, state grain commissioners for North Dakota, with offices in Minneapolis, who have sent bulletins to grain shippers cautioning them to use greater care in cooping loaded cars. Mr. Beaton has pointed out that during the month of October, one car out of eight arriving in Minneapolis or Duluth was more or less leaky. The records show that of 28,173 cars that were stopped and unloaded, either at Minneapolis or Duluth, 3,765 arrived with the cooerage in some way defective. Over another period 13 per cent of all the unloading at Minneapolis elevators showed looseness about the doors or other carelessness. The Tri-State Association believes that even the slight losses that occur are too important collectively to shippers, at this time of high prices, to permit them to continue, and they urge greater attention to cooerage, especially with regard to flax.

NEW ALFALFA ASSOCIATION.

The Southwestern Alfalfa Growers' Association, organized at El Paso, Texas, recently, has selected that city in which the annual meeting shall be held. The Association adopted the following standard:

"Fancy alfalfa shall be leafy, bright green, sound, sweet, well baled, properly cured and without bleach.

"Choice alfalfa shall be of good color, leafy, sound, sweet and well baled and may contain 10 per cent bleach and 5 per cent grass.

"Number one alfalfa shall be sound, sweet and well baled, and may contain 20 per cent bleach and 10 per cent grass.

"Number two alfalfa shall be sound but bleached, with grass not to exceed 25 per cent."

The terms and conditions of sale are f. o. b. shipping points, subject to the grading and weights of the Southwestern Alfalfa Growers' Federation.

ILLINOISANS IN NEW ORLEANS.

Sec'y S. W. Strong of the Illinois Association, accompanied by C. M. Bullitt of the Henderson Elevator Co., of Henderson, Ky., were in New Orleans about the middle of November to inspect the local system of handling grain, and familiarize themselves with the workings of the local grain exchange. Mr. Strong told the dealers at New Orleans that he felt assured that there would be more of the grain business of Illinois handled through New Orleans this season than there ever had been before.

With regard to the proposed improvement of the Mississippi and the construction of a deep waterway from the Lakes to the Gulf, Mr. Strong was quoted by the "States" newspaper as saying that "the position of Illinois on that subject had been conclusively shown by the appropriations it had already made for the upper part of the proposed waterway. And the grain dealers of the states are in sympathy with the movement. It would mean cheaper transportation, and the establishment of grain elevators along the whole course of the Mississippi."

Sec'y Strong's own report upon what he saw on this trip of interest to the trade will be found in the department of "Communicated."

NORTHEASTERN INDIANA.

The hay and grain dealers and shippers in northeastern Indiana recently organized an association with Fort Wayne as headquarters. It will be known as the Hay and Grain Producers' and Shippers' Association of Northeastern Indiana. Officers were elected as follows: President, H. H. Deam, Bluffton; vice-president, G. T. Burk, Decatur; secretary and treasurer, T. P. Riddle, Fort Wayne; executive board, E. M. Wasmuth, Roanoke; H. H. Deam, Bluffton; T. P. Riddle, Fort Wayne.

At a subsequent meeting the following preamble and resolutions were adopted:

"Whereas, It is recognized that the use of a written memorandum of purchase contract will have a tendency to encourage and to facilitate honorable and equitable practices in the hay and grain trade in addition to insuring acceptance upon the part of the buyer and delivery upon the part of the seller; be it

"Resolved, That it be the approved and adopted practice of the Hay and Grain Producers' and Shippers' Association of Northeastern Indiana that all purchases of hay or grain made by any member of this Association, except purchases of hay or grain from a member of this Association, be covered by a written memorandum of prescribed form to be furnished by the secretary-treasurer of this Association."

A hanquet was given to the Association at Fort Wayne on last evening, December 14.

ILLINOIS GRAIN DEALERS' ASSOCIATION COMMITTEE VISITS EASTERN MARKETS.

A committee from the Illinois Grain Dealers' Association, consisting of President Geo. D. Montelius; J. E. Collins, director, and S. W. Strong, the secretary, made a trip through the East and visited the markets of Baltimore, Philadelphia, New York, Buffalo and Toledo. The object of the trip of this committee was to inspect the elevator facilities, equipment for handling and weighing grain, methods of inspection, and rules of discounting off-grades.

It has been the policy of the Association for some years past to have committees visit terminal markets, Eastern and Southern, and the results have always been beneficial to the membership. The cultivation of friendly relations and the advertisement that Illinois has a bumper crop of oats, corn and other cereals tend to stimulate the interest of receivers and call their attention more particularly to Illinois for supplies.

At all the markets visited the very friendliest feeling for Illinois was evidenced. Every opportunity was afforded the committee to investigate elevator capacity, weighing equipment and inspection methods. While the methods differed slightly at some of the markets, all have adequate storing

facilities, equipment and proper rules and regulations for the handling of grain. Some of the markets have particular methods or safeguards as to off-grade stuff to protect the shipper from unusual and extreme discounts. The committee visited the railroad yards where inspection of carload lots was conducted; and investigated drying facilities also; and they believe that the results of the trip will be of much benefit to the Illinois shipper.

Twenty new members were received into the Association, and many of the receivers assured the committee that they would attend the next annual meeting of the Association, to be held in June, 1910. S. W. S.

MATTERS OF INTEREST TO THE TEXAS ASSOCIATION.

A recent Bulletin by Sec'y G. J. Gibbs of the Texas Grain Dealers' Association says, among other things:

I am advised by Chief Inspector J. E. Robinson of Fort Worth that much of the corn coming through Fort Worth is light in weight and chaffy, and that a large portion does not grade above No. 4. This grade is due to the effect of the severe drought of last summer and fall, but the corn is thoroughly dry, and in good keeping condition.

Texas now has near five million inhabitants, and we require for the needs of our state annually about 25,000,000 bushels of wheat, 250,000,000 bushels of corn and 50,000,000 bushels of oats. This fact ought to induce our farmers to pay every attention to grain raising. It is poor financial policy to send our cotton money North in exchange for grain that can be grown profitably in Texas.

Reports from all parts of Texas show that a good acreage has been planted to wheat. I am quite sure that more wheat has been planted in our state this fall than has been sown for many years. The weather has been ideal for its growth, and reports show a very favorable growing condition. In central Texas a good deal of land has been planted in oats, and the spring acreage of oats will be large.

The scarcity of corn in Texas induced farmers to plant wheat for pasturage, and the result is that we have the best grain acreage for many years. Should the weather condition be favorable, the grain men and farmers may look for a large crop in 1910.

From time to time I shall mail you decisions by the arbitration committee of our Association, as well as from the committees of Oklahoma, Kansas and from the National Association. Please read these carefully, and it will be well to file and preserve them, for they will contain the ethics and rules generally adopted by the grain trade of the country, and will serve to keep you away from trouble. All dealers should be familiar with our trade rules.

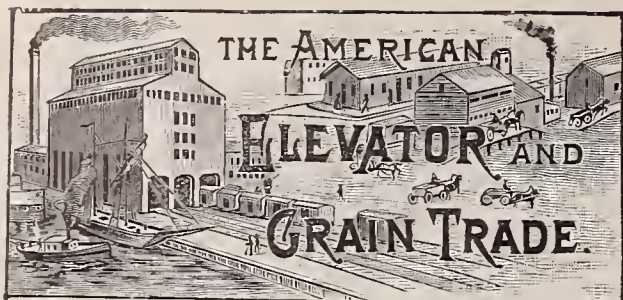
BUCKET-SHOPS RAIDED.

The police of Hoboken on December 2 raided two bucket-shops.

The Rex Cleveland bucket-shop was raided on November 16, after having gone on unmolested for several years. The operators escaped on a tip but the "books" were seized and some employees arrested.

Judge Bromwell on November 24 granted a new trial to W. D. Klausman, broker, who was tried and found guilty last summer of operating a bucket-shop in connection with the conduct of the Consolidated Stock and Grain Company's business in the Herschede building. In passing on the motion Judge Bromwell said the language of the statute and its terms are indefinite, but the indictment is sufficient, but inasmuch as the trial lasted for a period of three weeks and was in reference to a subject that was new to trial courts in Ohio, and the law is in many respects different in more or less important details from the laws of other states on bucket shops, consequently decision on other bucket-shops did not apply in Ohio.

Judge C. C. Kohlsaat of the United States District Court on December 6 issued an order to Sidmon McHie, the Capital Investment Company, at Chicago, and thirteen others, to show cause why they should not be restrained from using Board of Trade continuous grain quotations. The bill asking for an injunction was filed by the Western Union, Postal Telegraph, Cleveland and Chicago and Milwaukee Telegraph Companies which charge the Capital Investment Company with using and distributing the quotations illegally, through about seventy-five branch offices over more than 2,200 miles of private wires. This crowd of quotation thieves, it has been alleged, has been carrying on their business almost uninterruptedly for a number of years. McHie's company was formerly known, originally, as the Central Grain and Stock Exchange and latterly as the Central Grain and Stock Exchange of Hammond, and as the Hammond Elevator Company, with offices at Hammond, Ind. The present company was organized in 1908, and has offices on the eleventh and twelfth floors of the Rookery Building, which also shelters a bank or so and other respectable tenants.



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ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, DECEMBER 15, 1909.

Official Paper of the Grain Dealers' National Association
and of the Illinois Grain Dealers' Association.

THE BRITISH ELECTION.

The people of the United States have more than academic or passing interest in the parliamentary campaign about to begin with all the enthusiasm that characterizes a general election in Great Britain at a real constitutional crisis. Whatever one may think abstractly of the merits of "free trade" or "protection," as an economic question, and the influence of the respective policies upon international trade, no one familiar with American history will ignore the fact that on our material development since 1845 and over the solidarity of the Nation as the result of the Civil War, the repeal in 1846 of the British "corn laws" was an immense influence. It was "British Free Trade" and the McCormick Reaper that turned the West into one vast farm and opened to our superabundance of farm products the ports of the people who from 1846 to this day have always been "our best customers."

If we are to believe an "inspired" article in the Birmingham Daily Post of December 8, the principle of free entry of our grain, flour and meat is to be reversed in the event of the Unionist party being successful. The policy, as outlined by the Post, will be one of "mild protection" (1) to raise revenue, (2) to assist the home producer, (3) to give preference to the Colonies, and (4) finally "to mitigate unemployment by encouraging the home producer." In short, the policy is (however that fact may be disavowed) a return to the protective system (mildly at first, but inevitably avowedly after such a beginning, as in the United States and in Germany in recent years) in vogue for hundreds of years prior to the Peel administration of the '40s. Wheat will be liable to a duty of 2s. per quarter (6c. a bushel), with a preference

to the Colonies (Canada, Australia and India); flour will pay a still higher duty, and even our corn and bacon will be cut off the free list. Food prices will advance in the United Kingdom; and American shippers of grain and meat products will find themselves discriminated against wherever their consignments shall go.

SECRETARY WILSON'S REPORT.

Considerable space is given to details of Sec'y Jas. Wilson's report of the work of the Agricultural Department, in whose affairs the grain trade has an immense interest. This interest is not lessened by the fact that the Nation now seems to have come to a period in its agricultural history when the farmers have become conscious that their occupation is a science. Nor is it less important that they should apprehend that the Nation as a body of consumers must hereafter rely upon agricultural science rather than on mere experience for moderate priced food in the future—not to think of cheap food which seems no longer to be desired by either producers or handlers, however heavily the current prices of all products of the farm, save wheat (flour) alone, may bear upon the poor and deplete the income of the salaried class.

No one, we think, will be disposed to begrudge Sec'y Wilson one jot or tittle of the honor that has fairly come to him as director of this great scientific station. The Agricultural Department during his administration has been elevated from the status of a joke, as the late Mr. Morton of Nebraska treated it during his administration of its affairs, farmer though he was, to that of a great institution that is certainly elevating the standard of American agricultural science and familiarizing American farmers with advanced methods as rapidly as they will themselves consent to be enlightened and informed.

The excerpts we have selected from the reports are extracts from advance sheets of the report itself, and not a reprint of the skeletonized summary of the report which has already appeared in the daily papers; none of the matter has been published by the press so far as we are aware.

TO ATTACK FUTURES.

Herbert Knox Smith, in his report as Commissioner of Corporations, leads the legislative attack on transactions in grain and cotton for future delivery on the public exchanges, which may be expected in Congress this winter. He addresses himself to the matter of cotton futures alone; but if the reasoning by which he arrives at his conclusion thereupon is sound, by the same token dealing in grain also for future delivery is similarly "pure gambling and highly injurious to legitimate trade."

Mr. Smith's views will have the sympathetic endorsement of many people—even "legitimate" dealers in cotton and grain, as certain very good men honestly consider themselves in contradistinction from "even this publican" on the side in the "pit." A "New York trader," miffed at the defeat of the anti-corner rule at Chicago, declared to the Journal of Commerce that, "The only way to effect reforms of that kind is to obtain them by state or Federal legisla-

tion." Other hedgers of cash stuff in both the East and West, dealing in cash grain only, no doubt would agree to this view; for there is no end to the business men who have the idea that they can be relieved of all the annoyances and worries and uncertainties of their business if only "the law" could be called in to play the part of an automatic guardian for them.

And this after a thousand years more or less of parliamentary endeavor to correct by statute the ills that men are heir to. "While every day chronicles a failure," says Herbert Spencer, that cold-blooded analyst of human activities, somewhat out of favor for the moment, it must be confessed, "there every day reappears the belief that it needs but an act of parliament and a staff of officers to effect any end desired. Nowhere is the perennial faith of mankind better seen. Ever since society existed, Disappointment has been preaching: 'Put not your trust in legislation,' and yet the trust in legislation seems scarcely less diminished."

The "corner rule" principle had been tried out at Chicago half a generation ago and had been found a failure; the suppression by law of speculation also (Mr. Smith's "pure gambling" in futures) was tried out in the States and in Europe a hundred years ago and proved a failure; for nothing can prevent men's making bad ventures with their money or bad bargains in business. Why, then, this everlasting attempt by law or by rule to repeat this failure to prevent certain things by act of parliament when man himself can avoid their consequences better by looking out for himself?

THE ACREAGE PUZZLE.

The abiding problem of the "Crop Report" is the acreage; and it contravenes all Sec'y Wilson's repeated and exhaustive explanations of the manner in which the "Government Crop Report" is compiled, that its acreage rarely or never agrees with the state reports of the same crop, nor always, as was seen in the report issued on December 8, with itself, the latter report having revised the seeded acreage to wheat in 1908 by a million acres (31,034,000 instead of 30,034,000).

Then there's the corn acreage reported for 1909, about as follows:

	Government.	State.
Illinois	10,206,000	7,288,563
Iowa	9,340,000	7,654,401*
		8,213,280†
Ohio	3,834,000	3,050,825
Kansas	7,810,000	7,711,879
Nebraska	7,926,000	6,477,282

*Sec'y Wells; †Geo. M. Chappell, section director for Iowa of Weather Service. Indiana authorities do not report acreage.

Here, then, are five of the great surplus corn states in which the Government gives an acreage at least 6,373,000 acres in excess of the returns made by the state authorities. Which is correct?

Prima facie one would say the state reports. As a rule they are compiled from reports made by the assessors, whose figures are collected annually from the farmers, who are under oath when questioned. The Government revises its basis for estimating acreage only when a census is taken and thereafter adjusts its estimate of acreage annually by adding or deducting an estimated percentage of gain or loss from the preceding year, until a new census is taken. The

room for error in such a system was discovered after the census of 1900, as the trade will remember, when the acreage estimate so obtained was demonstrated to be actually worthless. Can it be any different now?

Most people accept the Government report as definitive simply because it is the "Government's", as if that label absolved its human makers from the effects of human deficiencies. Yet in point of fact the "Crop Report" can never be reliable in a fair sense of the word, until the Statistical Bureau devises some way to obtain, not an "estimate," but an accurate statement of the acreage under each crop each year.

AUTHORITY OF CO-OPERATIVE AGENTS.

It is doubtless familiar law to commission men in general, when the matter is called to their attention, that the authority of the company agents, or managers, legally covers but quite limited powers, which are confined strictly to their functions as buyers and sellers of grain for cash. As the law is interpreted by the Nebraska Supreme Court in the Geo. A. Adams Grain Company case, agents have, in the absence of specific corporate authority, duly delegated by the directors to their agents, no authority to "speculate"; that is, to hedge grain in any grain exchange, or to transact any business whatever except that specifically named in the articles of incorporation. Directors of such companies so frequently get chilblains when their agents' speculative trades, even those authorized by themselves, go against them—and such trades are by no means occasional with co-operative concerns—it is as well for commission men to bear the law in mind in forming connections of this nature and in executing what are manifestly purely "speculative" orders from such concerns.

THE COUNCIL ORGANIZED.

The federation of grain exchanges has been advanced to the stage of a temporary organization which to all appearances by February, 1910, when the next meeting of delegates will take place, will be made permanent.

While the delegates at Chicago protested that it was farthest from their thought that the Council of Exchanges (as the affiliation has been called) means anything like the elimination of the Grain Dealers' National Association as the representative body *par excellence* in grain trade affairs, the disposition of certain gentlemen to take up for immediate discussion and action for recommendation to their exchanges the certain "live questions," which proved to be the new live wire of a margin on cash trades, does throw out a hint that perhaps a federation of the exchanges might mean a closer organization of the receivers *per se*, differentiated from the shippers. Such a condition naturally obtains now, of course, although not perhaps in so concrete a form as might result through the influences that may come to be imperceptibly felt when the Council shall become a working organization. That the net result in that case would be undesirable does not yet appear, and it is useless to worry about what may never happen.

Should the unforeseen occur, it would mean simply, perhaps, a new turn to the work of the

National Association, not its elimination from the trade. For after all is said, the value to the receivers of very close touch with country shippers will always bring them together; and since there are so many mutual interests to be conserved by united action, we cannot yet imagine how the two bodies, the Council and the Association, can ever pull in different directions with safety or satisfaction to either.

THE WATERWAYS CONVENTION.

The New Orleans waterways convention does not seem to have been entirely satisfactory to the friends of the "14-feet-thro'-the-valley." President Taft was frank enough to say he had in that matter acquired the Missouri habit of asking for a guide. The river is there now, he suggested; it ought to be as usable for certain purposes as it was in the early days of the West; but no one seems to use it, except the coal men who go down the Ohio from the Pennsylvania coal regions with their barges to New Orleans. Now, why is this? He was not told.

A canal is not a carrier in the sense that a railroad is a carrier. Canal boats of no sort or description follow automatically the construction of a canal or the improvement of a river as locomotives, cars, freight platforms and depots follow the construction of railroads. The boats must be provided wholly by private enterprises or they will not be provided. The river is as clear for traffic now as it ever was, and probably on the average carries about as much water and certainly is more free of snags and similar impediments to commerce; but there are few boats and little traffic. St. Louis, in 1890, made river shipments of more than 600,000 tons as against only 89,000 tons in 1906, and yet rail shipments out of the same city increased from 5,000,000 tons in 1890 to 17,000,000 tons in 1906.

The President, then, said, he favors a 9-ft. channel in the Ohio River first, since it furnishes more than 50 per cent of the lower Mississippi traffic. If, therefore, the friends of the 14-ft.-thro'-the-valley project expect help at Washington they must deal more with the realities than with the generalities of a subject that is now worn pretty threadbare without having evoked anything very convincing, except that certain interests in Chicago and Illinois are apparently more concerned with possible water powers to be developed than with actual canal traffic.

ELEVATOR DUST.

The Bulletin of the Bureau of Labor on "Consumption and Elevator Dust," by Frederick L. Hoffman, is encouraging in the respect that elevator dust is less dangerous *per se* than street dust, which is inevitably contaminated by pathogenic germs, or microbes; nevertheless it is apparent that elevator operators, both of large and small houses as well, owe it to their employes to equip their houses with dust collecting apparatus in order to reduce the amount of dust naturally created by the operation of the plant to the minimum. Fortunately this is now days entirely practicable at a reasonable cost. Dust collectors have been so perfected and reduced in cost that their installation

is not burdensome in point of expense and will at once all but cure the dust nuisance, so far as the men are concerned, and also greatly benefit the plant of making it at all times cleaner and practically no longer liable to danger from dust explosions in case of accidental fire created by friction of the machinery or otherwise. Nearly if not all elevators of any considerable size which do considerable handling of grain are of course so equipped now; but many lesser, or country, houses, thinking the danger in either case insignificant, do not so protect either themselves from the explosion danger or their men from the evil effects of a dust-laden atmosphere in which they must of necessity work daily if not hourly when on duty.

INDIANA AGAIN THE WINNER.

For the third year in succession Indiana, Franklin County, corn growers have captured the grand sweepstakes prices at the National Corn Exposition. The winners have all been just "farmers." The winner of the single ear trophy this year, Fred C. Palin, is not even the owner of the land he farms. But these Franklin County prize winners are farmers, and Fred C. Palin is a good type—he is a thinker, a student of his occupation, its problems and its possibilities. They are, these Franklin County men, the kind of farmers whom President J. J. Hill should take to kindly—enthusiastically; they are making good themselves at the work of increasing their crop yields and doing it without impoverishing or robbing their lands, and are showing other farmers how they may do the same thing by mixing brains with fertilizer and working brains and muscles simultaneously.

But isn't it up to Illinois and Iowa, the corn states *par excellence*, to get busy and "change the venue" on these Franklin County men?

A MONARCH'S CONTEMPT.

Mr. Breed has contributed a curious chapter from a "hundred years ago," in the way of a lecture by Napoleon I to one of his ministers who had dared to report to him the views of members of the commercial exchanges of the time on the Napoleonic policy of non-intercourse which then afflicted the world—in an aggravated manner in which, as some economists think, the world's tendency toward excessive tariffs, with their maximum and minimum features, preferentials, retaliations, etc., threaten to bring the world's commerce and trade again, if the present craze for high tariffs continues. Napoleon had small respect for the "chattering" of business men who were not supposed, by that ruler, to know anything about the exigencies of government. Napoleon considered tradesmen as pragmatic rather than practical. One is inclined to think that Napoleon's contempt for the "mere merchant's" opinions, even on purely business matters, is shared by many of the present day "sovereigns" of the people—members of Congress, say, whose experience as politicians, as indifferent lawyers and as holders of petty legislative positions in the states in the past have, of course, endowed them with a superior order of wisdom, fitting them for the disposition of the great commercial problems of the nation!

EDITORIAL MENTION

This is the year when a corn drier is nearly as good as a "low-grade cyanide" proposition.

Uniform grading has taken another long step forward with the Missouri markets working officially under the National Association grades. Where next?

The Supreme Court decision in the Kansas City dockage case is expected soon; so shippers would do well to preserve their A/S—they may be worth 100 lbs. of grain each.

Are you using the Beatty-gram? If not you are taking chances for misunderstandings in trades that the simple addition to a telegram of time conditions to a contract would automatically eliminate.

The American Railway Association has approved the Demurrage Code prepared by the Association of Railway Commissioners; and it will no doubt eventually become a general regulation of the carriers.

The corn and bean crops of Mexico, the staff of life of the poor and the pleasure of the rich, were both short this year: but the taxing authority has suspended the tariff upon them until the domestic crops shall be again sufficient.

A North Dakota mayor, a grain buyer also, has been arrested on a charge of tampering with his grain scales. He seems to have overdone it—took too much at a draft. It's too bad; but it does seem as though the evil communications of politics do corrupt good manners even in North Dakota.

S. M. Jordan, corn expert of the Missouri Agricultural Board, says the complaint of "worn-out" land is already being heard in that state, more particularly in the prairie country of central and eastern Missouri. Mr. Jordan therefore finds a considerable part of his business to be to teach crop rotation and better cultivation.

An Illinois shipper was the victim of a Toledo sharper whom no one had ever heard of but a few country shippers who read the wrong kind of advertisements. This particular sharper got several cars before he found it necessary to quit that part of the country. Grain men ought to read their trade papers, and then there would be no excuse for getting pinched; men who advertise in the trade papers can be relied on as safe always.

The Iowa Corn Growers' Association Corn Show, held this month at Des Moines, was declared by the local press to have been the "largest and best" the association has as yet held, the exhibits having been very numerous and the attendance large. The local press seems, however, to have pretty much ignored the affair save to name the winners of prizes and to print in a few lines the daily program. Educationally speaking, one doubts if the show at Des Moines has proved anywhere near as

valuable as any of the previous ones held at Ames.

The "elevation allowance" rake-off will be continued at least until April 1, 1910. The mills of American courts and commissions grind slow but sometimes they do arrive at a conclusion they call final. The "elevation" question will reach that condition ultimately, without doubt. It has been in course of adjudication for only about five years now, and precipitancy must not be expected.

For the year ending July 31, 1909, the Argentine for the first time in history took first place among the grain exporting countries of the world, the shipments for the period having been 13,700,000 quarters from Argentina, 13,500,000 from the United States, and 12,100,000 from Russia. Truly, when we may add that the Argentine exported three times as much corn as did the United States the same year, a new period of commercial history has begun.

The switchmen's strike in the Northwest effectually tied up the Minnesota terminals for a short time, and much uneasiness was felt lest the walkout should become general; but the latest advices from St. Paul and Minneapolis would seem to indicate that the railroads are daily able to handle more cars and the mills are reopening in Minneapolis. Eastward the men declare that no strike will take place, and the danger of interrupted transportation seems to be over.

The National Corn Exposition has passed beyond the stage of a corn show, as was the first, at Chicago, two years ago, and has become a great mid-winter agriculture exposition of soils and methods, the products being the grains and grasses. In the present Show twenty-five states from Massachusetts to Montana are represented by exhibits of individuals, clubs, agricultural stations and colleges, all of which is as it were the mark of the beginning of a new dispensation on the farm. Rivalry, of course, brings the exhibits; but it is a wholesome kind, for it is also a stimulus to new and better things, just as competition is the real progressive life of trade and commerce, in spite of the common practical argument of combination to the contrary.

The increase in telegraph tolls by the device of the amendment of Rule 3 has again awakened interest in the proposition of Government ownership of the telegraph lines in this country. Men may differ on the propriety of this step on the ground of expediency and because of their different views upon the fundamental principles of the functions of the Government; but under the circumstances, the picture of conditions in other lands has its fascinations. Mr. Edward Beatty of New York only the other day, in one of his interesting daily market letters, commenting on the new reading of Rule 3, puts it in this way: "There must forever beat in the business man's soul a desire to see the Government in control of telegraphs, the same as of the postal service. A 1/2d (1c) a word is the rate all over the United Kingdom (Scotland, England, Ireland and Wales), min-

imum 12 words 6d (12c) including the address. For instance, if you send a message Glasgow to Belfast it is 1/2d a word just the same as if sent from London to a suburb. This certainly is cheap telegraph service and Englishmen on our exchange state it is efficient."

The Rall case referred to elsewhere again emphasizes the fact that carriers are responsible for the safe and prompt movement of commodities; and that when they fail to do either damages may be collected in the courts if the proofs are sufficient. The carriers presuming on the habitual neglect of shippers to ascertain their rights under the law, often make rules that to the ignorant have all the force and effect of law; and the bluff goes in the majority of cases. A man may not recover damages when he has suffered no damage, nor beyond what he has actually suffered; but when one has suffered a damage he should consult a competent attorney before surrendering his rights in the face of a rule, or bluff, often found in the small type that appears on railway and express company receipts and other documents.

Mr. Harry Kress, in one of his readable "White letters," states quite forcibly a palpable truth when among other things he says:

You might be interested to know that the average price being paid to the farmer for corn in Ohio and Indiana is about 50c per bushel. It is not necessary to say that this is more than should be paid, taking all the risks into consideration. I know of no class of men, outside of the country shippers, who are everlastingly giving the farmers the best of it. You act as freight house for the railroad company (without pay) and at the same time reduce your profits to almost nothing. The desire to handle grain at any price has bankrupted more shippers than any other one thing outside of speculation. It requires almost double the amount of money to operate your business to-day owing to the high prices prevailing. Increased competition causes you to handle less in quantity, which entitles you to a larger margin of profit. As it is to-day, the farmer is getting the cream and you are taking what is left.

Very true; but can Mr. Kress tell us how we can bring dealers around to that point where a quietus can be put on the "condition that confronts us"?

Mr. Hill at Omaha the other day repeated his warning at the Corn Show that wasteful farming is bringing this country face to face with a chronic state of food scarcity;—which peculiar kind of pessimism Sec'y Wilson would wish to put a crimp in by referring to his reportorial statement that this year of grace, 1909, is the farmers' year with crop yields surpassing in value all other crop years on record. But even Mr. Wilson does not deny the high prices; he glories in them, being a farmer and a teacher of farmers. But high prices ordinarily mean comparative scarcity, and that comes back again to Mr. Hill's contention that we are not producing enough foods to keep prices on a moderate level. On the other hand, the "Crop Reporter" demonstrates by Bureau of Statistics estimates, averaged for each decade since 1866, that the yields per capita of wheat and corn have increased respectively from 6.2 bus. in 1866-75 to 7.9 bus. in 1905-1908 and 24.6 bus. to 31.8 bus. Oats showed a decided increase from 6.9 bus. in 1866-75 to 10.6 bus. in 1896-1905, but a decline to 9.8 bus. in 1905-1908. The barley average more than doubled; potatoes and hay increased slightly, but

rye and buckwheat show declines. What, then, is the cause of the present high prices? The demand is not from abroad—the Argentine has relieved that. Is it too much new gold in the circulation, or is it a corner by the Society of Equity? At any rate, the condition does not spell prosperity for the masses the cost of whose living has become a serious matter; and so the apparently serious movement in New York and the East to cause a scientific enquiry to be made is not without interest.

The Chicago Board of Trade has legally established its proprietary rights in all quotations on grain and provisions originating on its trading floor; and in the interest of business morality, as opposed to the gambling and downright swindling of bucket-shop blacklegs, it has endeavored to enforce those rights without prejudice to the general public. Many bucket-shop swindlers have been dislodged in recent years; but it is mighty slow and discouraging work trying to educate the public when city administrations, the police, U. S. Senators, Congressmen and officialdom generally, cannot be made to understand the difference between an exchange and a public gambling shop and are disposed to throw the weight of their influence in favor of the latter when they take any action at all in the premises.

The National Council of Commerce came near "going by the board" the other day, but was saved by Sec'y Nagel. The executive committee, disheartened by the environment of standpatters, perhaps, were about to recommend its abandonment when Sec'y Nagel rushed into the breach, by declaring that the National Council could be made the connecting link between the Government and commercial America, and he promised the hearty co-operation of the Department of Commerce and Labor in accomplishing this end. The committee took heart, and assured the Secretary that renewed efforts would be made to enlist the support of all representative business bodies in the country, in order that an attempt might be made to develop unity of interest between various parts of the country and to make a general effort to increase foreign trade.

The fall and winter thus far has been exceedingly trying to corn shippers. The grain has dried out but slowly if at all and on test has shown heavy moisture content; and this condition has been universal, both as to locality and kind of corn. Corn is no different from other substances: it cannot lose moisture while lying in a moisture-saturated atmosphere, such as has obtained throughout the corn belt since the corn harvest began, however fine the weather may have been overhead. It is hardly necessary then to dwell upon the experience of the trade, since for weeks this thing has been uppermost in all dealers' minds. It is, however, possible to meet now and then, here and there, a man who is not of the Knockers' Cult, who is even able to talk calmly about the behavior of corn, who has been having very good gradings indeed on his shipments, all things considered. But it is generally found that this happy condition is not the result of luck, but of the art and habit of taking pains. One very considerable and prominent central Illinois

dealer said he did it by putting two men at the drag to the sheller instead of one; and found that his corn graded very well. It paid. How many others among us are equally careful?

The E. G. Rall Grain Co. of Ft. Worth recently recovered \$4,500 damages from a carrier for losses caused by delays in transit in 1907. While the carrier held the grain, the market declined and the shippers lost money because of the delay, and a referee fixed the amount. The case was simple enough. The plea of heavy business did not avail the carrier, which must adjust itself to the business it accepts, and cannot avoid its responsibility by declaring it accepted more business than it could handle. There is, after all, not much difficulty in collecting *just* claims; the real complaint about claims is that it is difficult to collect those which are vague or unfair, or poorly supported by the proofs or documents filed in support of them; and that is the claimant's lookout.

The abandonment of Sioux City as a terminal proposition by the Interstate Grain Company is locally attributed to the "bad faith" of the Milwaukee Road, which has not given that point the "concessions" expected. It is just barely possible that the commerce act does not permit the kind of "concessions" the builders of the leased elevator expected. It is one of the verities of the act that it does not always permit of the artificial manufacture of terminal conditions as to rates that certain people still want and which they used to get in the old days; although it can hardly be said that the act has reduced all points to the level of pure competition on the basis of their "natural advantages," or situation. The rates are still adjustable to preserve the vested right to equalized rates that grew out of old conditions.

To just what extent the Society of Equity program to "hold wheat" is responsible for the slow movement of that cereal cannot of course be determined. It appears certain, however, that many farmers are keeping back their grain; for a New Bedford, N. D., paper says what is generally true in the Northwest, that local merchants are unable to collect money for merchandise advanced to farmers who are waiting for a rise before selling; while Kansas bankers declare that no less than \$15,000,000 bank deposits have been withdrawn from the country banks this fall presumably to be used for living expenses while holding the wheat which is crowding elevators all over the state, and is piled up on the ground about the farmers' premises. What may happen is not in our line to predict; yet it is true as the Market Record says,—

If the farmer arbitrarily fixes a selling price for his wheat that has no basis in actual conditions, there must be a reactionary movement to restore the normal price average. It is yet to be demonstrated, however, that there has been any violation of this natural law; since the general rise in prices shows that the average conception of values has had to undergo a radical re-adjustment and the dollar level based on the known statistical position at the beginning of the crop year was no untenable conclusion. The movement of the actual grain to the terminal markets has rather belied that statement that the farmer is holding his grain. But this is a superficial view of the situation and a hasty conclusion of the figures. The farmer has not held his wheat in the sense of keeping all of it on his farm; he has stored it in

the elevators and while the elevator companies must move it to the terminals in order to keep their interior storage free, he has let go of it only when the price suited.

Another specimen of the law's delay and judicial reverential regard for the mere technicalities of the law as distinguished from the vital substance of truth was seen at Cincinnati the other day when a new trial was granted one W. D. Klausman, who had been tried (consuming three weeks' time) and found guilty of operating a bucket-shop in that city. The state statute, a new one, is said to be "indefinite" and so different from the laws of other states on this subject that opinions of other courts could not be accepted as authority. Klausman's attorneys, therefore, having gone through the record with the legal "fine-tooth comb," were able to call the court's attention to no less than 56 errors made in the trial of a cause whose object was to determine the question, and that only, whether Klausman had or had not been running a bucket-shop. Now, of course, it is not our purpose here to criticise the court; but merely to cite the case as a fair specimen of the way in which American courts are daily and hourly tying themselves up with the red-tape of legal quibble in a manner to render the system contemptible and to make the discovery of the simple fact that is the kernel of all law suits a practically impossible matter, or having found it, to make the truth the basis of a judgment or decree that shall end the litigation without its running through a series of appellate jurisdictions, with their "R. & R.'s," new trial, and so on.

The high prices of corn and oats have begun to have their influence upon the farmers of the East and South, who for years have been heavy buyers of Western grain for feed. In both sections corn is becoming the fashion. In the South the spread of the boll weevil in the cotton country has perhaps done more to give corn a hearing and a trial again than any consideration of either good farming or even of prices; but in New England the price has been the chief contributing factor. It will be remembered that corn is not an exotic in New England by any means. Among the prize winners at the Corn Show of 1908 was N. H. Brewer of Connecticut, whose success was but the climax of many years of corn improvement carried on there quietly enough by a few good farmers on those old and so-called worn-out lands. Rhode Island also claims, we believe, the honor of having had the largest yield of corn per acre for the country. But that the East will ever again be a "corn country" is hardly to be expected, in view of the fact that the requirements of that part of the country for farm produce and dairy products will continue to draw to these acres, as they have in the immediate past, the foreigner who has become habituated to small farms intensively worked—who are used to growing truck rather than field products; but so long as corn prices remain at current high levels, it is certain both the East and South will grow more of it, using for some purpose lands that have been lying fallow as too poor to work, while the West will probably take to growing more meat to take the place of that no longer produceable on the "ranges."

TRADE NOTES

The Burrell Mfg. Co., of Bradley, Ill., has increased its capital stock from \$25,000 to \$50,000.

G. H. Birchard, elevator builder and contractor, of Lincoln, Neb., is in the market for alfalfa mill machinery.

The Power Appliance Mfg. Co., of Minneapolis, Minn., has made very large sales of Sonander Automatic Scales during the season and is experiencing a good steady business on all their specialties.

"Some men are born successful engineers—and some achieve success by using Dixon's Flake Graphite,"—From *Graphite* for November, published by Joseph Dixon Crucible Co., Jersey City, N. J.

The Prinz & Rau Manufacturing Company of Milwaukee, Wis., has been enjoying large sales recently of their Prinz Automatic Separators. They have published a descriptive circular of this machine which they will mail to all interested parties.

The B. S. Constant Co., of Bloomington, Ill., has been sending their B. S. C. Chain Feeder and Drag and U. S. Corn Sheller to all parts of the United States. These machines have become well known and established for themselves a reputation for excellence.

The catalogue No. 81 published by the Jeffrey Manufacturing Company of Columbus, Ohio, gives a general price list and description of elevating, conveying and power transmitting machinery and chains. It comprises nearly 400 pages and is profusely illustrated and carefully indexed.

A way to be happy is told by the Sidney Elevator Mfg. Co., of Sidney, Ohio, manufacturers of the New Era passenger elevator. This way is by installing a New Era lift. Undoubtedly the installation of a passenger elevator in a plant saves time and energy and consequently is a promoter of happiness.

The Charter Gas Engine Co. of Sterling, Ill., has issued a new catalogue on the Charter Gas and Gasoline Engine. The different sizes and styles of engines are shown as well as all engine parts. The book is well printed on enameled paper and contains useful information for gas engine users.

Grain men who are interested in oats bleaching should write to Skillin & Richards Manufacturing Company of Chicago about their Peterson Oats Bleacher. This is a compact machine, taking up but little room and is said to be the only successful and practical system in use for bleaching and purifying of oats.

It is stated that arrangements have been made whereby American machinery may be exhibited in the Argentine 1910 agricultural exposition without payment for floor space. A Buenos Aires committee of Americans has been appointed, of which Mr. A. R. Hanchell is chairman to represent American interests.

Sprout, Waldron & Company, of Muncy, Pa., invite all grain dealers who are interested in feed grinding to write for their Special Feed and Meal Milling Catalogue No. 26. It contains much useful information, in addition to telling about the Monarch Attrition Mill, one of the most successful machines of the Sprout, Waldron make.

At a meeting of the National Gas and Gasoline Engine Trades Association at Chicago November 30 to December 2 the following officers were elected for the ensuing year: President, M. A. Loeb, Cincinnati, Ohio; vice president, C. O. Hamilton, Elyria, Ohio; treasurer, O. M. Knoblock, South Bend, Ind.; secretary, Albert Stritmatter, Cincinnati, Ohio. The next convention will be held at Cincinnati in June, 1910.

Recent sales of American Machinery & Construction Co., of Milwaukee, Wis., included a No. 3 American Cyclone Aspirator to the Adam Gettelman Brewing Co., of Milwaukee. This machine will be used to separate the sprouts from the malt as it comes from the kilns and it will also cool the malt in the event of its being dumped when at too high a temperature. A No. 1 American Barley Cleaner and one American Cyclone Aspirator was

also sold to Sterr Bros. of Lomira, Wis., to be installed in their new elevator and malt house.

Advertisers should discriminate between those journals that advertise and those that merely give publicity. There's a difference. Advertising rightly done sells goods. Publicity only announces without being backed up by selling qualities. Place your advertising in journals of character. They advertise and sell goods. Others give publicity.

George Severance, secretary, announces that the annual wheat convention will take place at Pullman, Wash., south of Spokane, January 13 to 15. This gathering is of interest to all engaged in the wheat industry, from the grower to the baker, and includes farmers, warehousemen, shippers, buyers, exporters, millers, bakers and representatives of the Railroad Commission and dealers in sacks and farm and harvest machinery. It is planned to make the program one of the most interesting in the history of the association, which was first organized three years ago and has done much for the wheat industry of the inland empire.

HAMILTON ELEVATOR.

The Hamilton Elevator owned by Gustav Wolf, Hamilton, Ind., is a general purpose house to a greater extent than is common. The products of



ELEVATOR OF GUSTAV WOLF, HAMILTON, IND.

the neighborhood are corn, wheat and clover seed; and provision must be made to take care of all of these. Besides these, Mr. Wolf handles large quantities of wool, onions in bulk and potatoes, as buyer, and also of flour, feed, fertilizers, etc., as retailer.

The elevator, which stands alongside the Wabash tracks, is 24x60 ft. in size and has a storage capacity of 10,000 to 12,000 bushels in ten bins. There is the usual outfit of elevating and loading machinery all operated by gas engine power. The premises were entirely overhauled during the summer and early fall to give greater capacity for taking care of corn; and the plant is in fine condition for the busy season now coming on.

WHEAT GROWING IN ARGENTINE.

The Argentine hardly offers very many attraction to the North American as a place of settlement as a farmer, fertile though the country is. The best lands are owned by the "Dons" in large part, and are rented to settlers rather than sold, and farmed on the renter system, the tenants being usually Italians who go there to make a fortune and then return home. Many succeed. However, there are some tracts open to general settlement; and in reply to enquiries, the Department of Commerce and Labor, through Consul-General Bartleman at Buenos Aires, furnishes the following information for those interested in the wheat lands of that country:

A gentleman at Paraguil, Province of Buenos Aires, on the Southern Railway, writes: "With reference to the information you require as to new settlers in the wheat-growing districts in this country, I would suggest Puan or Carhue as

very likely districts for beginners. The cost price of land in these districts is \$100 per hectare (2.47 acres), and its rental value \$4, \$5, \$6 per hectare, according to the distance from the station. These lands have also the advantage of being near to Bahia Blanca. My experience has been principally with the Russian colonist, who begins as a rule by renting 100 hectares, at, say, \$5 per hectare, \$500. He also provides a mud hut, well, and corral, at a cost of about \$350; one plow, at \$100; harrow, \$30; cart, \$250; harness, rawhide, \$50; reaping machine, \$450; wheat seed, 5,000 kilos, at \$9, \$450; 8 horses, at \$50, \$400. The mere necessities of living will cost for the year, especially the first year, \$800. This makes a total preliminary expenditure of \$3,380. Of course there are many other expenses at harvest, but these are usually paid for by the crop. As far as my experience of Russian colonists goes, I gather they prefer not to become proprietors and generally rent on a three years' lease, and at the end of the term move on to fresh land. As a rule, land after three years' tilling requires four years' rest before putting it again under agriculture."

The second letter is from a gentleman in the southern part of the Province of Cordoba, near Arias Station:

"The following is an approximate estimate of the capital to be invested and probable returns on a farm of 125 squares, or, say, 500 acres, more or less:

"Capital: Horses and mares, \$35 to \$80 each. \$2,800 (or optional, bullocks, 16 spans at \$130 each, \$2,080, and 5 horses at \$80, \$400; total, \$2,480); plows, 2 double and 1 single, \$160; harrows, 2 at \$50, \$100; one header, \$400; wagons, 3 at \$300, \$900; sowing machine, \$350; harness for horses, \$220; tools and necessities, \$300; house, roof, etc. (mud walls), \$150; total, \$5,380.

"Working expenses: Labor, plowing, etc., 3 men, \$540; food, etc., for same, \$290; harvesting, 7 men with food, etc., \$850; seed wheat, 12,500 kilos (1 kilo equals 2.2046 lbs.), at \$10 per 100 kilos, \$1,250; bags, calculating a return of 1,600 per square equals 187,500 kilos, at 70 kilos per bag equals 2,680 bags, at 20 cents, \$536; thrashing 1,875 quintals of 100 kilos, at \$1, \$1,875; living expenses, 12 months, at \$50, \$600; insurance against hail, 6 per cent on \$10,000, \$600; total, \$6,541.

"Return of crop: Wheat, 187,500 kilos, less 20 per cent as rent of land, 37,500 kilos, leaves a net yield of 150,000 kilos, at \$10 per 100 kilos, or \$15,000.

"The above is based upon the present high price of wheat, and if the general average price of \$6 were taken, it would materially alter the net results."

A BARREL OF CORN.

A "barrel" is a very uncertain quantity and yet we find it used as a measure very frequently in Louisiana. A barrel of coal in Louisiana is defined by statute at 2.6 bushels of say 78 pounds each, or about 200 pounds. Another and an older measurement for the so-called barrel of coal was four cubic feet, which, however, only makes about 2.57 Winchester bushels dry measure of 2,688 cubic inches each. As is generally known, our barrels of fuel oil are rated at 42 gallons, upon just what authority we don't know. A generation ago lard oil in Cincinnati was rated at 43 gallons to the barrel. Maryland rates a barrel at five bushels, without stating the bushels, but we presume Winchester, 2,688 inches. Flour is universally rated at 196 pounds to the barrel, and yet for corn the common measure in Louisiana, so far as we know, is a flour barrel of the standard size, heads 17 inches in diameter, filled level full. This measure is only used for corn in the ear, or corn in the slip shuck, and in the good old days of flat boating some of the Western dealers selling corn in the ear along the coast in Louisiana made it convenient to have a test barrel or large size and delivery barrels of slightly smaller size.

A recent test made by us of a potato barrel of flour barrel size, that is 17-in. heads, filled level full with slip shuck corn gave the following results: The total weight was 111 pounds. The barrel weighed 17 barrels, leaving 94 pounds net of slip shuck corn. This corn was then shucked and the corn in the ear weighed 86 pounds and the shucks weighed 18 pounds, verifying the 94 pounds. The 86 pounds of corn in the ear was then shelled and gave 71 pounds of shelled corn and 15 pounds of cobs. This experiment, which was apparently a fair experiment on a homogeneous pile of corn of more than a thousand barrels, gave the result of 71 pounds, or slightly over a bushel and a quarter of shelled

corn from the standard 17 inch flour barrel size of barrel of corn in the slip shuck.

This, as every corn grower knows, will always be rather an uncertain measurement for corn, because just as good wheat will vary in weight from 60 to 64 pounds per bushel dry measure of 2,150 cubic inches, so one barrel of corn may weigh more than another. In our own experience we have had corn shelled out from a barrel of the flour barrel size hereinbefore spoken of, and only got 30 pounds of shelled corn. That, however, was very poor corn, nubbins, with heavy shucks. It is a wide range between 30 pounds and 71, but the standard ought to be a bushel and a quarter per barrel for flour barrel size of good corn in Louisiana.—Louisiana Planter.

HARRY ARGALL.

It is not often Australians are found domiciled at American grain elevators; but when they are found they are generally of the sort of men who make good. Harry Argall, now at Benson, is of this kind. He was born at Sydney on December 30, 1859. His father was a grain man, and the son has been at it now for twenty years, his experience covering the buying and selling of grain as well as



HENRY ARGALL.

operating elevators. At this time Mr. Argall is manager for the Northwestern Elevator Company at Benson, Minn.

EXPORTS AND IMPORTS.

The following is a statement of the exports and imports of various cereals, seeds, etc., for the month of October, 1909, and for the ten months ending with October, 1909, as reported by the Bureau of Statistics, Department of Commerce and Labor (quantities only unless otherwise stated):

ARTICLES.	OCTOBER, 1909.		TEN MONTHS ENDING OCTOBER	
	1908	1909	1908	1909
Exports—				
Barley, bu.....	1,453,158	631,327	4,435,121	3,416,664
Buckwheat, bu.....	1		50,931	194,614
Corn, bu.....	1,795,160	2,200,188	27,971,574	27,913,772
Corn Meal, bbls.....	20,880	21,248	297,781	400,923
Oats, bu.....	206,742	92,203	877,181	959,545
Oatmeal, lbs.....	551,248	1,754,773	19,595,020	13,939,834
Rye, bu.....	434,914	58,034	2,630,841	367,893
Rye Flour, bbls.....	470	228	3,796	2,520
Wheat, bu.....	12,071,045	8,565,153	80,249,950	36,335,054
Wheat Flour, bbls.....	1,219,550	1,184,765	10,647,897	7,437,048
Bran, Millfeed, etc., tons.....	2,418	4,414	71,193	43,536
Dried Grains, etc. tons	5,058	4,381	60,921	63,598
Malt, bu.....	21,249	14,373	130,027	119,034
Rice, lbs.....	85,670	378,860	1,100,323	2,012,646
Rice Bran, Meal, etc., lbs.....	2,623,515	4,508,923	16,934,792	15,733,185
Clover Seed, lbs.....	2,170,525	1,619,643	4,749,725	11,778,856
Flax Seed, bu.....	245,869		1,955,463	
Timothy Seed, lbs.....	1,930,703	1,642,452	18,082,732	16,988,983
Other Grass Seed, val.	\$81,993	\$140,901	\$291,917	\$384,509
Beans, etc., bu.....	35,087	28,562	217,416	243,548
Imports—				
Oats, bu.....	15,060	1,005	1,914,450	4,341,197
Wheat, bu.....	2,108	2,279	28,320	19,450
Wheat Flour, bbls.....	1,261	5,729	24,161	93,582
Rice, lbs.....	4,033,960	4,349,180	74,974,866	74,192,301
Rice Bran, Meal, etc., lbs.....	13,109,406	11,972,251	114,328,650	115,051,162
Castor Beans, bu.....		51,610		234,718
Clover Seed, lbs.....	799,015	1,123,391	14,705,947	13,528,670
Flax Seed, bu.....	7,969	261	34,587	922,632
Beans, bu.....	35,323	26,504	1,937,188	2,848,559

RECEIPTS AND SHIPMENTS.

Following are the receipts and shipments of grain, etc., at leading receiving and shipping points in the United States for the month of November, 1909:

BALTIMORE—Reported by the Acting Secretary of the Chamber of Commerce.

Articles	Receipts		Shipments	
	1909	1908	1909	1908
Wheat, bushels.....	629,775	831,817	627,606	643,635
Corn, bushels.....	1,025,454	911,186	405,793	320,684
Oats, bushels.....	184,245	156,924	100	2,199
Barley, bushels.....	3,013	33,015		
Rye, bushels.....	73,539	82,418		8,571
Timothy Seed, lbs.....		871	2,194	4,762
Clover Seed, lbs.....	1,369	5,926	1,271	
Hay, tons.....	5,553	5,271	1,597	2,180
Flour, barrels.....	294,501	273,443	140,676	125,952

BOSTON—Reported by James A. McKibben, Secretary of the Chamber of Commerce.

Articles	Receipts		Shipments	
	1909	1908	1909	1908
Flour, barrels.....	264,232	229,348	89,373	79,448
Wheat, bushels.....	2,536,622	1,840,724	1,855,025	1,455,300
Corn, bushels.....	291,615	174,251	18,038	
Oats, bushels.....	442,566	389,233	2,820	8,790
Rye, bushels.....	8,063	5,403		17,125
Barley, bushels.....	6,520	80,176		49,755
Flaxseed, bushels.....	75,301	51,000	37,312	43,776
Peas, bushels.....	14,858	12,074	13,346	1,800
Millfeed, tons.....	4,747	1,503	518	95
Corn Meal, barrels.....	1,890	2,760	1,536	1,070
Oat Meal, barrels.....	44,356	16,410	10,275	14,926
Oat Meal, sacks.....	14,994	28,540	7,190	12,094
Hay, tons.....	11,769	15,020	2,124	323

BUFFALO—Reported by Fenton M. Parke, Secretary of the Chamber of Commerce.

Articles	Receipts		Shipments	
	1909	1908	1909	1908
Wheat, bushels.....	14,732,626	13,871,235		
Corn, bushels.....	862,830	582,000		
Oats, bushels.....	2,070,229	1,369,944		
Barley, bushels.....	3,081,658	2,508,163		
Rye, bushels.....	121,790	131,489		
Other Grass Seeds, lbs.....	82,262	27,200		
Flax Seed, bushels.....	3,657,602	3,622,863		
Flour, barrels.....	1,635,668	1,148,246		

CHICAGO—Reported by George F. Stone, Secretary of the Board of Trade.

Articles	Receipts		Shipments	
	1909	1908	1909	1908
Wheat, bushels.....	2,514,520	1,758,300	1,680,646	679,575
Corn, bushels.....	5,887,050	5,284,013	4,622,493	3,719,059
Oats, bushels.....	7,570,450	5,833,620	7,327,932	5,445,887
Barley, bushels.....	3,293,527	1,996,087	1,028,995	716,812
Rye, bushels.....	183,000	177,000	73,187	68,752
Timothy Seed, lbs.....	4,134,953	4,071,822	1,481,204	938,784
Clover Seed, lbs.....	251,789	765,461	110,928	495,669
Other Grass Seeds, lbs.....	5,130,900	3,542,063	3,810,419	3,237,045
Flax Seed, bushels.....	221,955	242,880	18,252	2,576
Broom Corn, lbs.....	1,783,685	3,606,346	2,187,299	1,761,775
Hay, tons.....	18,244	21,635	1,865	1,798
Flour, barrels.....	863,078	804,774	946,429	872,907

CINCINNATI—Reported by C. B. Murray, Superintendent of the Chamber of Commerce.

Articles	Receipts		Shipments	
	1909	1908	1909	1908
Wheat, bushels.....	284,846	322,548	275,152	310,768
Corn, bushels.....	643,010	485,180	362,796	207,708
Oats, bushels.....	552,602	366,826	441,076	238,650
Barley, bushels.....	125,050	90,000	550	
Rye, bushels.....	68,863	40,704	44,348	20,989
Malt, bushels.....				
Timothy Seed, bags.....	6,480	5,552	2,791	3,461
Clover Seed, bags.....	1,555	2,416	2,589	2,203
Other Grass Seed, bags.....	22,116	12,476	14,638	8,947
Hay, tons.....	13,138	9,140	9,299	8,311
Flour, bbls.....	133,314	103,975	106,975	54,605

CLEVELAND—Reported by M. A. Havens, Secretary of the Chamber of Commerce.

Articles	Receipts		Shipments	
	1909	1908	1909	1908
Wheat, bushels.....	30,667	64,380	54,762	6,690
Corn, bushels.....	704,232	511,190	91,472	38,090
Oats, bushels.....	404,155	661,770	165,122	143,060
Barley, bushels.....	81,954	28,770	1,408	
Rye, bushels.....	30,002		1,750	
Flax Seed, bushels.....				
Hay, tons.....	7,300	5,469	1,847	598
Flour, bbls.....	8,480	8,019	15,680	1,535

DETROIT—Reported by F. W. Waring, Secretary of the Board of Trade.

Articles	Receipts		Shipments	
	1909	1908	1909	1908
Wheat, bushels.....	74,612	194,308		51,121
Corn, bushels.....	174,700	357,655		134,696
Oats, bushels.....	201,517	262,012		140,900
Barley, bushels.....	189,995	135,000		
Rye, bushels.....	26,958	35,708		40,706
Flour, barrels.....	26,505	22,200		10,200

DULUTH—Reported by Chas. F. MacDonald, Secretary of the Board of Trade.

Articles	Receipts		Shipments	
	1909	1908	1909	1908
Wheat, bushels.....	10,086,567	12,133,025	13,785,663	9,503,468
Corn, bushels.....				
Oats, bushels.....	675,679	673,722	862,873	966,653
Barley, bushels.....	2,231,518	1,743,579	2,874,357	2,136,402
Rye, bushels.....	134,459	90,246	188,023	40,256
Flax Seed, bushels.....	4,488,640	4,710,866	2,996,313	4,431,430
Flour, bbls.....	952,225	802,425	988,200	926,220

GALVESTON—Reported by C. McD. Robinson, Chief Inspector of the Cotton Exchange and Board of Trade.

Articles	Receipts		Shipments	
	1909	1908	1909	1908
Wheat, bushels.....			52,000	244,000
Corn, bushels.....			94,286	2,055,770

MILWAUKEE—Reported by H. A. Plumb, Secretary of the Chamber of Commerce.

Articles	Receipts		Shipments	
	1909	1908	1909	1908
Wheat, bushels.....	1,073,100	1,418,000	400,639	751,208
Corn, bushels.....	180,400	365,000	325,654	153,497
Oats, bushels.....	1,140,000	1,102,400	896,275	865,519
Barley, bushels.....	1,938,000	1,648,600	1,037,460	1,233,560
Rye, bushels.....	116,000	127,800	82,297	99,088
Timothy Seed, lbs.....	975,125	852,079	273,440	590,465
Clover Seed, lbs.....	675,740	799,096	944,750	538,598
Flax Seed, bushels.....	115,540	161,120		1,060
Hay, tons.....	2,940	3,253		134
Flour, bbls.....	496,925	234,175	449,620	398,300

MONTREAL, QUEBEC, CANADA—Reported by George Hadrill, Secretary of the Board of Trade.

Articles	Receipts		Shipments	
	1909	1908	1909	1908
Wheat, bushels.....	4,269,787	4,406,488	5,703,476	4,825,122
Corn, bushels.....	31,826	171,470	3,430	31,230
Oats, bushels.....	872,828	402,980	82,093	56,945
Barley, bushels.....	369,160	433,329	113,197	351,064
Rye, bushels.....	820	40,702	42,837	142,700
Flax Seed, bushels.....	105,294	118,627	40,545	22,800
Flour, bbls.....	160,188	162,267	343,795	289,507

NEW YORK—Reported by H. Heinzer, Statistician of the Produce Exchange.

Articles	Receipts		Shipments	
	1909	1908	1909	1908
Wheat, bushels.....	4,748,500		3,119,732	
Corn, bushels.....	572,625		41,201	
Oats, bushels.....	3,278,275		14,868	
Barley, bushels.....	1,109,375		168,814	
Rye, bushels.....	1,150			
Timothy Seed, lbs.....			14,610 bgs	
Clover Seed, lbs.....	19,081 bgs		12,496	
Other Grass Seeds, lbs.....				
Flax Seed, bushels.....	801,000		152,535	
Hay, tons.....	33,319		45,350 ba's	
Flour, bbls.....	917,544		345,555	

OMAHA—Reported by F. P. Manchester, Secretary of the Grain Exchange.

Articles	Receipts		Shipments	
	1909	1908	1909	1908
Wheat, bushels.....	741,600	1,726,800	538,000	1,350,000
Corn, bushels.....	355,300	311,300	722,000	129,000
Oats, bushels.....	870,400	988,800	882,000	1,261,500
Rye, bushels.....	43,000	34,000	26,000	9,000
Barley, bushels.....	101,000	171,000	53,000	23,000

PEORIA—Reported by John R. Lofgren, Secretary of the Board of Trade.

Articles	Receipts		Shipments	
	1909	1908	1909	1908
Wheat, bushels.....	86,805	50,000	53,000	41,000
Corn, bushels.....	1,305,091	1,255,822	850,942	691,794
Oats, bushels.....	418,146	448,700	627,400	549,085
Barley, bushels.....	356,652	278,000	119,373	112,000
Rye, bushels.....	13,100	26,000	9,900	7,000
Mill Feed, tons.....	4,226	4,030	7,376	2,720
Spirits and Liquors, bbls.....	11,323	9,481	48,565	58,899
Syrups and Glucose, bbls.....	10,750	5,150	7,950	7,764

ELEVATOR AND GRAIN NEWS

ILLINOIS.

The Metcalf & Kinahan elevator at Lanesville, Ill., has been completed.

H. W. Jefferson & Co., are erecting a new crib at the elevator in Libby, Ill.

The Morchel, Dodds & Wagner Co. has sold its grain elevator at Groveland, Ill.

The Lincoln Grain Co., of Lincoln, Ill., is having its elevator remodeled and rebuilt.

A new engine was installed in the Farmers' Elevator at Thomasboro, Ill., recently.

The Roby Grain Co., of Roby, Ill., has increased its capital stock from \$2,500 to \$3,500.

D. C. Belsley has purchased an interest in the grain business of J. P. Garber at Roanoke, Ill.

F. W. Meents has been having some improvements on the driveway of his elevator at Kankakee, Ill.

The addition to the E. A. Wood Elevator at Gifford, Ill., which will double the capacity, is about completed.

The Farmers' Elevator Co., of Watseka, Ill., has purchased the Rose & Jakle Elevator at Gilman, Ill., for \$8,000.

The C. B. Munday Elevator Co. has installed a new cleaner in its elevator at Dorsey, Madison County, Ill.

Work on the Hillman Elevator at Freeport, Ill., has been delayed owing to the illness of the superintendent.

The Raven Elevator Co., of Raven, Edgar county, Ill., has increased its capital stock from \$6,000 to \$20,000.

The buildings of the Farmers' Elevator at Shirley, Ill., have been moved and workmen are now putting in the cement foundations.

Ten farmers have formed a stock company and purchased the grain elevator at Scotland, Ill. O. B. Riley has been appointed manager.

The elevator at Armstrong, Ill., formerly owned by Bartlett, Patten & Co., of Chicago, has been purchased by E. M. Davis of Armstrong.

Messrs. Young and Ledden have been delayed in the completion of their elevator at Ospur, DeWitt county, Ill., by failing to receive their motor.

The Farmers' Elevator Company at Hartsburg, Ill., which has been in existence several years, recently declared a dividend of 100 per cent.

Corn is being marketed in the ear at the elevator in Sibley, Ill., for the first time in many years, owing to the large crops and lack of crib room.

Elgy Bertwell is building a new crib and has purchased a new elevator, which will be run by gasoline engine, at Otter Creek, Jersey county, Ill.

The excavation work for the new grain elevator at Union Station, near Emden, Ill., has been completed and the concrete foundation is now under way.

The new elevator of the Stanard-Tilton Milling Co., at Alton, Ill., has been completed and the machinery is being installed. The capacity is 100,000 bushels.

Mathias Bros. & Co., of Prophetstown, Ill., have filed articles of incorporation, with \$20,000 capital, to deal in grain, hay, live stock, fuel and building material.

C. A. Bunyan has purchased the Suffern & Hunt Elevator on the Wabash right-of-way at Hammond, Ill. The new owner was employed by the old firm as buyer.

Thomas Hardin will discontinue farming near Poag, Madison County, Ill., and has bought an elevator at Deland, Ill. He will take possession in February.

Thomas Abrams has sold his remaining half interest in the Ficklin Elevator at Tuscola, Ill., to Peter Kruse, who now owns and operates the entire plant.

The Farmers' Union Warehouse & Supply Co., of Mt. Vernon, Ill., has been incorporated with \$20,000 capital by Joseph Burkett, N. G. Jenkins and C. T. Schmalried.

Farmers of Strawn's Crossing, near Jacksonville, Ill., have filed articles of incorporation for the Strawn's Crossing Farmers' Elevator Co. with \$6,000 capital.

The old Michigan Central Grain Elevator, which was erected in 1859 and was one of the landmarks of Joliet, Ill., has been razed. It was built of wood and 110 feet high.

F. J. McCormick has disposed of his grain elevator at Marseilles, Ill., and removed to Hills, Johnson county, Iowa. J. V. Shaughnessy, of Chicago, purchased the Marseilles Elevator. The lat-

ter had been in the grain business at Cornell, Ill., until last spring, when he sold his interests there and took up his residence in Chicago.

Three new grain elevators are to be erected by the Illinois Traction System at a point between Springfield and Mackinaw, Ill. Work will begin within a short time.

In order to accommodate the double track through Atlanta, Ill., the Chicago & Alton Railway finds it necessary to slice four feet off the west side of the Hawes Elevator in that city.

Elliott James is moving his elevator from near the interurban tracks to a position near the Vandalia tracks at Maroa, Ill. He is putting in storage capacity for 12,000 bushels of grain.

The Burtonview Grain, Coal and Lumber Company, of Burtonview, Logan county, Ill., with \$8,000 capital, has been incorporated by Theodore W. Baker, Charles F. Sparks and John C. Wigginton.

The Latham Farmers' Grain Company of Latham, Ill., has just finished some improvements to its plant. An addition 12x14 ft. has been made to the office and a cover has been built over the weighing scales.

New grain elevators are to be erected at Downs and Ford Woods, both in McLean county, Ill., by the Downs Farmers' Elevator Co. The building at Downs will be started immediately and will have a capacity of 40,000 bushels.

The elevators in Lincoln, Skelton and Burtonview, all in Logan county, Ill., formerly owned by the Gordon Grain & Milling Co., were recently sold at auction by the sheriff for \$12,000. The First National Bank of Lincoln and the Frorer estate were the purchasers.

The Farmers' Elevator Company, of Philadelphia, Cass county, Ill., which was recently incorporated with \$8,000 capital, has elected Henry Cunningham president and Miles Kendall secretary and treasurer. The company has purchased the C. W. Savage Elevator at that place. The sale includes several lots and two smaller buildings, one of which contains a feed grinder. The consideration was \$5,000.

IOWA.

The Hakeman Bros. Elevator at Hartwick, Iowa, is about completed.

Burgess Carr has sold his grain elevator at Swaledale, Iowa, to Frank Hales for \$6,000.

Malton & Rhutasel have sold the elevator at Geneva, Iowa, to John Waddington of that place.

George B. Hall, of Wesley, Iowa, has traded Dakota land for the elevator at Hanna, Kossuth County, Iowa.

The Ober-Kingsbury Elevator at Titonka, Iowa, has been sold to B. S. Pannkuk, August Schram, Herman Nelson and Long & Hanson, of Sioux City, Iowa.

Work on the new Middle West Elevator at Council Bluffs, Iowa, has been completed and it is now in operation. The Rock Island Railroad is putting in tracks that will be used by three roads.

Clem Falcon has sold his interest in the Western Elevator Co.'s Elevator in Mount Vernon, Iowa, to D. E. Hedges of Central City, Iowa. The style of the concern hereafter will be Howson & Hedges.

The Farmers' Elevator at Ericson, the first station south of Boone, Iowa, on the Fort Dodge & Southern Interurban Railway, has been sold to C. C. Little, of Huxley, Iowa. The latter will operate a general store in connection with the elevator business.

George B. Wittemore has disposed of his interests in the Central Grain Co., at Sioux City, Iowa, to M. L. R. Tankersley, and will devote his entire time to the merchandise brokerage business. Richard B. Kent, who has been associated with Mr. Whittemore, will remain with the grain company.

The Bowen & Regur Elevator Co. has sold its elevator at Rossie, Clay county, Iowa, to a farmers' company, which has incorporated with \$3,000 capital. The incorporators are S. H. Bell, J. M. Starr, J. L. Boylon, A. Peterson, W. F. Peterson, W. H. Welsbrod and D. R. Jones. W. F. Peterson will continue as buyer.

S. Miller & Son, of Independence, Iowa, have purchased from the Western Elevator Co., of Winona, Minn., the grain elevator business and equipment at Doris, Buchanan County, Iowa. The Messrs. Miller will continue to reside in Independence and the business will be conducted through the local banks.

The Interstate Grain Co., of Sioux City, Iowa, which is backed by the Rosenbaum Grain Co., of Chicago, has closed its plant and offices in that city. The reason given is that the railroads have not accorded fair treatment in the matter of rates to eastern points. The elevator has a capacity of 200,000 bushels and cost \$100,000. Members of the Sioux

City Commercial Club will take the rate matter up with the railroad officials at Chicago.

EASTERN.

Robert Ramsdell is erecting a grain store in Epping, N. H.

The Peterson Grain Co. has taken possession of the Benedict Feed store at Great Barrington, Mass.

George A. Laird has put a new roof on his grain building at Royalton, Vt. He has also made other repairs.

The J. Quat Co., of Paterson, N. J., has been incorporated with \$50,000 capital to deal in grain, feed, hay, oats, corn, flour, etc. The incorporators are J. Quat, E. Quat and A. Kantrowitz.

In the event that a suitable location can be had a large grain elevator will be erected in Uniontown, Pa., by Chicago capitalists. An effort is being made to secure a site near railroad tracks.

W. N. Potter & Sons have leased a building in Millers Falls, Mass., that was formerly used for a rag shop and will convert it into a grain elevator. The building is near the Boston & Maine Railroad tracks.

The Jewett City Grain Elevator, Jewett City, Conn., was sold at public auction recently by court order as the result of a foreclosure made by F. S. Leonard. All the property that was sold to George H. Lowerre, Jr., by Mr. Leonard on March 30, 1906, was bid in by the latter for \$4,900.

The new elevator that the Spencer Kellogg Co. is building at Buffalo, N. Y., in anticipation of an enormous increase in grain receipts at that port following the opening of the barge canal, will be completed before January 1, 1911. The estimated cost of the structure is \$225,000. It will be of reinforced concrete and modern in every respect.

Plans are under way for the establishment of a chain of elevators in Connecticut as a result of the merger of the Vincent Bros. and William M. Terry Co. at Bridgeport, two large dealers in grain and feed. The deal includes the branch elevator which the Terry concern operated in Danbury. The new project will be managed by the Vincent Bros. and will have the financial backing of William M. Terry. The latter has been in business more than fifty years. Vincent Bros. are members of the Boston Chamber of Commerce and the New York Produce Exchange.

OHIO, INDIANA AND MICHIGAN.

Business men of Reese, Mich., are agitating for another elevator for the town.

The new elevator of H. S. Grimes & Co., at Lucasville, Ohio, has been completed.

Burrell & Morgan contemplate the erection of a \$10,000 grain elevator at Elkhart, Ind.

The Farmers' Cooperative Elevator Co., opened for business recently in Sandusky, Mich.

John A. Fairchild, of Lagro, Ind., has purchased the elevator and mill at Vicksburg, Mich.

The Pears-East Grain Co., of Buchanan, Mich., will build a grain elevator at Niles, Mich.

M. C. Dowell & Co.'s Grain Elevator at Stanwood, Stark Co., Ohio, is now ready for business.

Articles of incorporation have been filed by the Burt Elevator Co., of Burt, Mich., with \$6,000 capital.

James Fenner of Constantine, Mich., has purchased Mr. McMillen's interest in the elevator at Martin, Mich.

The elevator at Crane, Tippecanoe County, Ind., which was recently operated by J. H. Merchant, is now conducted by John Foster.

Rapid progress is being made on the new Bowers-Niblick Elevator at Decatur, Ind., and it is hoped to have it ready for operation by the first of the year.

Messrs. Edwards and Smith, of Ashland, Ohio, have purchased the grain warehouse at Marshallville, Wayne County, Ohio, owned by W. H. Reinhold.

W. F. Close is building a warehouse to take the place of the elevator at Byron, Mich., which was destroyed by fire. In the spring he will build an elevator.

Iglehart Brothers, whose flour milling plant at Evansville, Ind., was recently destroyed by fire, will erect a concrete elevator of 100,000 bushels capacity in connection with the proposed new plant.

The grain firms of Alder & Stofer, of Buffalo, Ind., and Fred G. Heinmiller, of Lafayette, Ind., have consolidated and the new concern will be known as the Alder Grain Co. A branch office will be opened in Indianapolis, Ind. The officers are W. W. Alder, president; T. O. Stofer, treasurer;

Fred G. Heinmiller, secretary. Mr. Stofer will manage the Buffalo office, W. W. Alder will be in charge in Lafayette, while Mr. Heinmiller will go to Indianapolis.

The Panhandle Railroad has purchased a large grain elevator adjacent to its right of way at Union City, Ind., and it will soon be moved to make way for necessary changes.

Eesley Bros., of Lebanon, Ohio, have purchased the grain elevator at Union Village, near Lebanon, and after making extensive repairs will be ready for business. A two-story addition is being erected.

F. C. Williams, who purchased the big Price & Bruce Elevator at Crawfordsville, Ind., has sold it to A. B. Cohee & Co., of Frankfort, Ind. The elevator was recently repaired. Cohee & Co. now have seven elevators.

The L. A. Strong Elevator Co., at Mansfield, Ohio, has decided to discontinue business and will liquidate. The management states there will be no losses to farmers, as all the stored grain is more than protected by stock on hand.

The Blish Milling Co., of Seymour, Ind., has leased the plot of ground formerly occupied by the Scottsburg Grain Exchange, Scottsburg, Ind., which was recently destroyed by fire, and will erect a modern steel elevator. The new plant may be operated with electricity.

WESTERN.

Business men of Glendive, Mont., are agitating for an elevator.

The Farmers' Elevator Co. has been organized at Stratton, Colo.

The new grain elevator at Chinook, Mont., has been opened for business.

Rapid progress is being made in the erection of the new elevator at Mead, Colo.

The Rocky Mountain Elevator Co. has begun the erection of a new elevator at Benchland, Fergus County, Mont.

The Montana Central Elevator at Benchland, Fergus county, Mont., has been completed and is receiving grain.

The St. Anthony & Dakota Elevator Co., of Minnesota, with a capital of \$1,000,000, has incorporated in Montana. J. W. Sherwood of Great Falls is state agent.

The Hemet Grain & Produce Co., with headquarters at Hemet, Cal., has been incorporated with \$50,000 capital. The directors are H. S. Dukes, Cyril Robinson and Margaret A. Dukes.

Four reinforced concrete grain elevators will be erected in connection with the Portland Flour Mills' proposed new plant at Portland, Ore. The old plant was recently destroyed by fire.

The Cargill Elevator Co. has purchased two corner lots on Central Avenue and First Street, Stanford, Mont., and will erect a large building to accommodate its machinery and implement business.

M. B. Lytle, whose grain elevator was destroyed by fire recently at Lewistown, Mont., is rushing preparations for rebuilding and expects to have his new building completed soon after the first of the year.

In order that the foundations of a grain elevator which it is planning may be constructed before steady cold weather prevails, the F. C. Ayres Mercantile Co. recently was granted a permit for the work by the building inspector at Denver, Colo.

SOUTHERN AND SOUTHWESTERN.

The Cox-Campbell Grain Co., of Vernon, Texas, has filed a certificate of dissolution.

The Arapaho Mill & Elevator Co., of Arapaho, Okla., has increased its capital stock from \$10,000 to \$25,000.

The El Paso Grain Co., of El Paso, Texas, has filed an amendment increasing its capital stock from \$6,000 to \$12,000.

F. B. Gibson, of Pecos, Texas, has purchased the El Paso Grain Elevator, El Paso, Texas, from the Rosenbaum Grain Co., of Chicago.

The Pegram Grain & Lumber Co., of New, Sampson county, N. C., has been incorporated with \$50,000 capital by N. B. Cooper, W. M. Carr and others.

The Hughes Warehouse & Elevator Co., of Nashville, Tenn., has awarded a contract for the erection of a warehouse and grain elevator to cost \$50,000.

The report of the receivers of the defunct T. H. Bunch Co., of Little Rock, Ark., shows that the assets exceed the liabilities by \$280,000 on the face of the books.

The Donna Grain, Ice & Implement Co., of Donna, Hidalgo county, Texas, has been incorporated with \$4,000 capital by B. H. Hooks, R. P. Boyce and J. Boardman.

The additional story to the City Grain & Feed Co.'s structure at Columbia, Tenn., is about completed. The capacity will be 300 barrels of flour and 600 barrels of meal. About \$35,000 is being

spent on the improvements, the machinery costing \$25,000.

The Lawther Grain Co., of Dallas, Texas, with \$32,000 capital, has been incorporated by Robert R. Lawther, Joseph E. Lawther, William J. Lawther and others.

The Central Warehouse & Elevator Co., of Nashville, Tenn., has purchased the elevator of the Kendrick-Roan Co., at West Nashville. The latter concern went into bankruptcy some time ago. The elevator has a capacity of 200,000 bushels and will be known as "Elevator B."

The grain conveyor at Port Chalmette, St. Bernard county, La., which was demolished by a September storm, has been restored and the Terminal Co. has completed other preparations for the handling of the grain trade. The shipments of grain from this port have been very heavy.

It is understood the Texas City Transportation Co., has closed the contract for the erection of a 500,000-bushel capacity elevator at its terminals in Texas City, Texas. The structure will be erected immediately east of the power plant and will be connected with the large pier by conveyors. Cylinder storage tanks will be a feature. The concern is now building terminals at a cost of \$2,000,000.

MISSOURI, KANSAS AND NEBRASKA.

Work on the new elevator at Denton, Neb., is being pushed.

W. H. Hurley has purchased the elevator at Montrose, Mo., from J. D. Mann.

The new elevator of the Central Granaries Co., at Wymore, Neb., has been completed.

S. Burk has built a large addition to his grain elevator at New Gottland, near Lindsborg, Kan.

R. R. Chenoweth has sold his elevator at Western, Neb., to a newly organized farmers' company.

The new Farmers' Elevator Co., of Greensburg, Kan., is now prepared to receive bids for the erection of the building.

The slanting roof over the cob and feed rooms at A. F. Jenne's Elevator & Feed Mill in Eureka Kan., is being extended.

Henry Scheve, a farmer living near Ellis, Neb., is erecting an elevator on his farm. It will have a capacity of 12,000 bushels.

The N. Sauer Milling Co., of Cherryvale, Kan., has closed its elevator at Lyons, Kan., until the next crop of wheat is raised.

E. B. and C. L. Weekes, sons of the head of the firm, have withdrawn from the Weekes Grain Co., of Omaha, Neb., and are now conducting a commission business.

The rumor circulated in the Southwest that the Bennett Commission Co. of Topeka, Kan., had gone out of business is untrue; they are still in business as usual, with offices at Topeka and Wichita.

The Farmers' Elevator Co., of Hubbard, Dakota county, Neb., was organized recently. The officers are: President, Thomas B. Long; vice-president, Fred Bartels; secretary, Carl Anderson; treasurer, John Howard; directors, Louis Knudsen, M. Green and Samuel Knox.

THE DAKOTAS.

The new Farmers' Elevator at Lake Andes, S. D., is nearing completion.

C. G. Dunn's Elevator at Farmer, Hanson county, S. D., has been completed.

An elevator is in course of erection at Morton, near Stirum, Sargent county, N. D.

The new Rector Elevator at Stirum, Sargent county, N. D., has been completed.

J. M. Rohe & Co. have purchased the Farmers' Elevator Co., at Niobe, Ward County, N. D.

The Farmers' Elevator recently completed at Kintyre, Emmons county, N. D., has begun operations.

The Western Lumber & Grain Co. has purchased two lots at Rhame, N. D., and will erect an elevator.

Chris Johnson, of Chester, S. D., has completed an elevator on his farm with a capacity of 1,400 bushels.

The Consolidated Elevator Co. has just finished its elevator at Oriska, N. D. Robert Freeman is manager.

The Great Western Elevator Co. is installing a new engine room and office next to its elevator at Wheatland, N. D.

The Johnson Elevator Co.'s Elevator at Napoleon, N. D., has been sold to Joseph Meier and W. M. Noddings.

Work has been commenced on the Jacob Barth, Sr., Elevator at Mott, N. D., and will be pushed with vigor. Its capacity will be 30,000 bushels. It

is aimed to have it ready for operation by the first of the year.

Articles of incorporation have been filed by the Tolstoy Grain & Implement Co., of Tolstoy, S. D., with \$20,000 capital.

The Ellendale Grain & Produce Co., of Ellendale, N. D., has let the contract for an elevator with a capacity of 30,000 bushels.

Some Hallowe'en revelers at Huron, S. D., emptied 150 gallons of gasoline from a storage tank in a grain elevator.

The large Webb Elevator at Merricourt, Dickey County, N. D., which has been in course of erection for some time, has been completed.

The Columbia Elevator Co. has selected a site for an elevator in the new town of Indian Creek, between New England and Horswill, N. D.

The Palermo Farmers' Elevator Co., of Palermo, Ward Co., N. D., is erecting a feed mill and installing a 16-horse power gasoline engine.

F. L. Wheeler is building an elevator in the new town of Nyberg, between Scotland and Tyndall, S. D. The farmers are also building an elevator.

T. N. Wold, of Sawyer, S. D., has disposed of his elevator and residence at that place and will spend the winter in Northwood, N. D. Later he will reside in Minot, N. D.

The Farmers' Elevator Company has completed its new 40,000 bushel elevator at Emery, S. D., and it is now in operation. The new structure has seventeen bins and the machinery is driven by a 12-horsepower gasoline engine.

Farmers in the vicinity of Plana, Brown county, S. D., plan to organize a farmers' elevator. There are now two elevators in the town, and it is possible a deal may be made for the purchase of the Northwestern or the Kargon. Otherwise a new elevator will be erected.

Dr. Sprecker of Parkston, S. D., is arranging to build a modern elevator at Mott, N. D., with a capacity of 40,000 bushels. He takes over the contract and lease formerly owned by Mr. Mehrer of South Dakota. The latter will erect his elevator on his son's ground southeast of Mott.

The new elevator in connection with the Russell-Miller Co.'s new mill at Beach, N. D., is in operation. Its capacity is 100,000 bushels. It has ten cylinder cement tanks 15 feet in diameter and 65 feet high and four intermediate bins. The structure was erected by the Barnett & Record Co., of Minneapolis, Minn.

MINNESOTA AND WISCONSIN.

Axel Newdall has leased the Bingham Elevator at Sleepy Eye, Minn.

C. S. Harris has opened the elevator at East Henderson, Sibley county, Minn.

Work is being rushed on the new feed mill for the Foley Elevator Co. at Foley, Minn.

The Farmers' Elevator Co.'s new engine and office room at Arco, Minn., has been completed.

The new elevator of the Red Lake Falls Milling Co., at Badger, Minn., is now receiving grain.

The work of raising the elevator of the Sheffield Mill at Morristown, Minn., has been commenced.

Work on the 20,000 bushel addition to the Manitowoc Elevator Co., Manitowoc, Wis., has been commenced.

Martin and Joseph Campion are installing an elevator in their granary at Horton, Olmsted county, Minn.

It is reported that R. B. Coon is to conduct the grain warehouse at Hillsdale, Barron county, Wis., in the near future.

The Ada Milling Co. has begun the erection of a warehouse for the storage of grain adjoining its mill in Ada, Minn.

Louis Powers has sold his elevator at Maryville, Mower county, Minn., to Minneapolis men, who will soon open for business.

The Andrews & Gage Elevator Co., has rented the Northwestern Elevator at Halstad, Minn., and is now operating two houses.

The new Ervin Elevator at St. Cloud, Minn., has been completed and is now open for business. It has a capacity of 35,000 bushels.

Farmers in the vicinity of Hudson, Wis., met recently and decided to have an elevator of their own. Stock subscriptions will be taken.

The new elevator of the Hanson & Barzen Milling Co., in Crookston, Minn., has been completed. It is equipped with modern appliances.

The Parker Elevator at Hadley, Minn., has been purchased by the Hubbard & Palmer Co., of Mankato, Minn., who will open for business in a short time.

The grain elevator, which was shifted from its position by a boiler explosion in the Pabst Brewery, Milwaukee, Wis., recently, has been lifted from its foundation by the use of 800 jacks. The

foundation will be rebuilt and the building shifted back to its original position by rollers.

L. N. Loomis, of Minneapolis, has sold his elevators in Epsom and Ruskin, both in Rice county, Minn., to DeWald & Waters of Freeman, S. D.

The Funk Elevator at Glenwood, Minn., on the Minneapolis, St. Paul & Sault Ste Marie Railroad, has been re-opened with P. H. Wheeler in charge.

The new steel elevator for Everett, Aughenbaugh & Co., at New Richland, Minn., has been completed. A brick track scales will soon be installed.

The new Richland Elevator Co. has acquired the Wightman Feed Mill at New Richland, Minn. It is said the mill will be removed to the site of the elevator.

The W. W. Cargill Elevator at Racine, Minn., has been leased by the Cargill Commission Co., of Minneapolis. S. O. Sanborn will continue as local representative.

A 25-horse-power gasoline engine has been installed in the Farmers' Co-operative Elevator at St. Hilaire, Minn. Insurance on stock has been increased to \$2,000.

The Society of Equity of Olmsted county has definitely decided to erect and operate an elevator in Rochester, Minn. A committee has been appointed to solicit subscriptions.

The stockholders of the Sage Bros. Grain Co. held a meeting at Kasota, Le Sueur county, Minn., recently and amended the articles of incorporation increasing the capital stock to \$50,000.

The Farmers' Elevator, which has been in course of construction at Fergus Falls, Minn., for some time, has been completed. The building is of concrete and will be in charge of M. A. Martinson.

The Ottawa Elevator Company of Ottawa, Minn., has been incorporated under the special law of 1905 regarding co-operative organization. C. T. Barker was elected president and David R. Morgan secretary and treasurer.

The Belle Plaine Equity Elevator Co., of Belle Plaine, Wis., has been reorganized and has purchased the new potato warehouse recently erected at that place. E. S. Hildeman is president and August Krueger secretary.

The firm of Lindquist & Erickson has sold its feed grinding, flour, wood and fuel business at Hoffman, Minn., to John Christianson and J. P. Mattson. Mr. Erickson will continue as wheat buyer for the Atlantic Elevator Co.

CANADIAN.

A 60,000-bushel elevator has been erected at High River, Alta.

The elevator of the Burrard Grain Co., at Rawl, Alta., is about completed.

Richardson & Son have built a 30,000-bushel elevator at Wainwright, Alta.

The Security Elevator Co.'s elevator at Biggar, Sask., has been completed.

The Kinistino Milling & Elevator Co., of Kinistino, Sask., has begun operations.

It is reported the Cargill Elevator at Eyebrow, Sask., is shifting from its foundations.

There are now four elevators at Woodhouse, Alta., and a town-site will soon be surveyed.

It is reported that a large Chicago company is seeking a site in Winnipeg, Man., for a grain elevator.

The new elevator of Leitch Bros., at Bulyea, Sask., containing 1,000 bushels of oats, burned recently.

The Alberta Grain Co., Ltd., Edmonton, Alta., has increased its capital stock from \$100,000 to \$300,000.

The Alberta Pacific Elevator Co. has erected an elevator at Maple Creek and a storehouse at Walsh, Sask.

An elevator will be erected at Fort William, Ont., in the spring by the Forwarders' Co., of Kingston, Ont.

An elevator with a capacity of 10,000 bushels is being erected at Pontypool, Ont., by Kennedy & Co., of Toronto, Ont.

The capital stock of Conger & Co., Ltd., grain and lumber dealers of Rouleau, Sask., has been increased to \$200,000.

During the year about 200 elevators have been erected in Saskatchewan, bringing the grain storage capacity of the province up to 24,000,000 bushels.

The new concrete elevator of the Globe Elevator Co. at East Calgary, Alta., has been completed and is now ready for business. The capacity is 265,000 bushels.

Speers, Ross, Ltd., has been incorporated under the Manitoba Companies Act with \$50,000 capital and office in Winnipeg, to own, operate and construct grain elevators. The provisional directors

are R. J. Speers, Wilkie, Sask; L. Kennedy, W. S. King, D. M. King, T. J. Murray, Winnipeg.

A ten-tank elevator with a capacity of 250,000 bushels has been completed for the Canada Malting Co. at St. Boniface.

The elevator of Harvey Clark at Schomberg, Ont., which was destroyed by fire, has been rebuilt and is now owned by J. Moore.

A large addition is being built to the Davidson & Smith Wholesale Elevator at Fort William, Ont. It will be equipped with modern automatic and weighing machinery.

A record was made for one week in November by the elevator at Port Arthur, Ont. It shipped 2,287,000 bushels in six days' run, being double that of any week last year.

R. A. Martin, of Vancouver, B. C., mortgagee, is now in possession of the elevator and flour mill at Swan River, Man. A mortgage sale was held recently, but there were no bids.

The Grain Growers' Grain Co., Ltd., has purchased the site of the old Hotel du Canada at Winnipeg, Man., and will erect an office building. The purchase price was \$155,000.

The Western Farmers' Milling Co., which has been incorporated at Lethbridge, Alta., will erect several elevators on new lines being built between Taber and Medicine Hat, and Lethbridge and Weyburn, each of 30,000 bushels capacity.

[For the "American Elevator and Grain Trade."]

GRAIN TRADE NEWS FROM OHIO.

BY H. L. SPOHN.

There is still a decided scarcity of No. 2 Red wheat in this section. Rail receipts have been very light recently, and it is evident that farmers are not satisfied with present offerings and are holding their surplus wheat for higher prices. The smaller elevators scattered through the country are of the same opinion as farmers, with the result that many of the mills have been having more or less trouble during the past few weeks in securing wheat supplies to meet even the limited demand for flour. Reserve stocks of millers have been drawn upon heavily and in many instances they have been completely exhausted.

Toledo millers have made heavy deliveries on December contracts recently, and several hundred thousand bushels have thus changed hands. There has been no possibility of an export flour business for a long time, prices at this time being at least two shillings out of line and this has somewhat reduced the demand for wheat supplies which would otherwise have been most pressing.

Many of the mills have been forced into the Toledo market and other large grain centers to secure supplies for their operations, which are now about half capacity. Fortunately there has been a very heavy call from consumers of flour for certain blended grades and this has furnished a market for more Northern and No. 1 Hard than there has been in this section for many years. Another cargo of 111,000 bushels came in last week from Duluth, swelling local stocks to a little more than 1,000,000 bushels.

The wheat acreage of this state will be a trifle heavier than this year but the increase will amount to a very small percentage and in point of area will be of little consequence. Growing wheat is in far better condition, however, than it was last year and the plants are said to be in splendid shape to withstand the severe test of an Ohio winter.

Corn is moving a little more freely than it did, but receipts are still considerably below what they should be. This is due to the fact that the quality is not up to standard, the weather having been extremely bad for maturing purposes. The early receipts of the new crop were 'way off grade, the bulk being graded as "sample." The past week has shown some improvement in quality, a little better drying weather having prevailed, and most of the corn now coming in is grading No. 3 and No. 4. Moisture tests on corn receipts for the past few days have ranged all the way from 17.2 to 21.6 per cent. which is still far from satisfactory. It is believed, however, that a few days of good curing weather will remove considerable of the moisture and that not only will the quality improve but that with this improvement will come a decided increase in the volume of shipments. A strong Eastern demand has kept the available supply here down to a minimum, and there is now less than 100,000 bushels on hand.

Farmers have been turning oats into the market a little more liberally recently and thus raising money to meet the usual holiday expenses. The amount estimated on hand here now approximates 237,388 bushels as against 27,066 bushels a year ago. The quality is holding up well, and there has been a rather brisk Eastern demand which has infused more or less life into the business. It is estimated that there is still a fair percentage in first hands, considerable of which will be placed in motion between now and the first of the year.

A. W. Thompson, a prominent grain dealer of Indianapolis, has been elected to a seat on the floor of the Toledo Produce Exchange.

Fred W. Rundell of W. A. Rundell & Co. has returned from an extended trip to Atlantic Coast cities, including New York and Boston. He was accompanied by Mrs. Rundell.

After serving about two years as assistant secretary of the Toledo Produce Exchange, Eugene Holder has been promoted to the position of Deputy Inspector under "Big Chief" Culver.

A new blackboard has been set up at the Produce Exchange. The improvement is very marked over the old board, showing several changes in the system of grouping the various departments.

E. W. V. Kuehn of the firm of Crumbach & Kuehn has returned from a trip through Indiana, Illinois and Wisconsin. He says that wheat fields look flourishing in every section through which he passed.

Invitations have been received by local grain men to the Grain Exchange day at the National Corn Exhibition at Omaha on December 16. It is doubtful if there will be any representation from this point.

It is reported that there is a surplus of corn being offered on the market in Champaign County, O., and that the elevators of that vicinity are incapable of handling the large amount which farmers are desirous of selling.

The Toledo Produce Exchange recently received a visit from President George E. Montelius of Piper City, Sec'y S. W. Strong of Pontiac, and Director J. E. Collins of Garrett, representing the Illinois Grain Dealers' Association.

Final arrangements have been made for the agricultural school which will be held at Bowling Green, Ohio, this month. Various branches of farming will be taught from a scientific standpoint by instructors from the best agricultural colleges.

Fire was recently the cause of \$2,000 damage to a cargo of flax in the steamer Portage, which was consigned to the National Milling Company of Toledo. The flames broke out while the vessel was passing through the Detroit River and considerable of the damage was occasioned by water.

According to Charles S. Burge, of the S. W. Flower Seed Company, there is a large amount of old clover seed still in the country. "This will have to come out sooner or later and is bound to have a bearish effect on the market. The quality of new seed is not nearly as good as last year's crop," said he.

Burglars recently affected an entrance into the office of the Groce Elevator Company, at Ashville, O., blowing the safe and wrecking the office. The only loot they secured was a number of farmers' notes which are non-negotiable. After stealing a horse and buggy in the neighborhood, they made their escape to Columbus and have not since been detected.

If the plan of Street Superintendent Peter T. McNerny is carried out, the University farm, consisting of about 300 acres of land, will be turned over to the raising of corn, oats, hay and garden crops needed in the various city departments next year. The city of Toledo has harvested its corn crop from two small tracts and is highly satisfied with the results. Thirty-six hundred bushels of corn, worth about \$1,500, was raised.

The following were recent visitors on the floor of the Toledo Produce Exchange: A. Boyer, Monroe, Mich.; O. King, Indianapolis; D. O. Baker, Butler, Ind.; E. E. Burnham, Deerfield, Mich.; B. K. Holmes, Detroit; A. H. Nienow, New Prague, Minn.; Otto Waitzmann, Chicago; O. P. Bresnahan, Ada, Mich.; A. B. McGrew, Pittsburg; T. A. Morrisson, Kokomo, Ind.; O. J. Thompson, Kokomo, Ind.; C. E. Downey, Chicago; W. M. Goodman, Chicago; Ben Levy, Ft. Wayne, Ind.

A cereal, fruit and vegetable show has been arranged and will be held at Kalida, O., under the auspices of the Farmers' Institute Board of Union Township on January 7-8, in connection with the regular annual institute. Contests will be open to every citizen of Putnam County. The corn exhibit will be in charge of C. A. Burkhart, H. T. Stump, and Joe Brinkman; wheat, A. G. Verhoff and W. H. Rower; oats, John F. Clevenger and Stanley Goodwin. Among the speakers to address the meeting are S. E. Strode of Crawford County, and J. L. Buchanan of Carroll County.

Most of the Indiana grain dealers started to buy corn in November 22.

M. E. Whipple, who disposed of his elevator, feed grinding, flour and feed business at Ogilvie, Minn., to F. A. Starry, of Glencoe, Minn., has removed from Ogilvie.

The Great Northern Elevators have broken the world's record for grain shipments, loading out 785,000 bushels of wheat in one day from Superior, Wis., recently. This is more grain than can be stored in several grain houses located at the head of the lakes. Most of the Superior elevators were about emptied by the time navigation closes, but the railroad strike has been seriously affecting the grain business and the receipts have ceased entirely.

THE EXCHANGES

On December 8 the Chicago Board of Trade directors bid \$2,400 each for four memberships to be retired.

The Pittsburg Hay and Grain Exchange enjoyed their forty-fourth annual banquet on last evening (December 14). The affair took place at the Elks' Hall, Cedar avenue, N. S.

The New Orleans Board of Trade grain committee in November adopted and the Board approved the Grain Dealers' National Association grade definitions for kafir corn and milo-maize.

Beginning Thursday, December 9, at 12 o'clock, Chicago time, the Chicago Board of Trade is posting the opening Buenos Ayres cable. The previous day's close will be given as usual every morning.

Some crank having sent crazy letters to several members of the Chicago Board of Trade, threatening to dynamite the "pit," the public galleries were permanently closed on November 18, and will hereafter be accessible by card only.

Beginning November 29 the posting by the secretary of the Chicago Board of Trade of the visible supply figures will include only stocks at United States points for last year, as well as this year. The Canadian report will be separate.

The Memphis Merchants' Exchange has expelled from membership the Taylor-Greer Grain Co. "for failure to fulfill the award of the appeal committee of September 24, 1909, in the case of Bower & Brown Elevator Co., Porter, Okla., against the Taylor-Greer Grain Co."

The annual election of the St. Louis Merchants' Exchange will take place in January. First Vice-President M. C. Cochrane and C. F. Sparks of Acton are candidates put forward by their friends. Custom has usually elevated the first vice-president to the presidency.

An amendment to the Rules of the St. Louis Merchants' Exchange was voted on on November 22, but failed to carry. It aimed to license smoking on the floor between 9:30 a. m. and 1:15 p. m. Another amendment which failed to carry would have required members to charge rental for bags loaned to shippers or customers.

Bert Lang was on November 30 the recipient of a diamond watch fob from members of the St. Louis Merchants' Exchange as a testimonial of their appreciation of his work as chairman of the committee in charge of the Chicago trip a few weeks ago, which was followed by a meeting which resulted in the organization of a Council of Grain Exchanges.

The Philadelphia Commercial Exchange, through its board of directors, has adopted a resolution requesting the Pennsylvania delegation in Congress to support proposed legislation in aid of the United States Public Health and Marine Hospital Service. The measure is intended to provide more adequate remuneration for the officers of that service and for the payment of a salary to officers retired at the age limit or for physical disqualification. The service covers the operation of twenty-one marine hospitals, maintains forty-three quarantine stations in the United States and performs many other public duties of the highest value to the country. It was said that the officers in the service received smaller pay than any other branches of the Government service.

Commissioner of Agriculture Rankin of Kentucky has refused the petition of the Louisville Board of Trade that he revoke the appointments of W. H. Silbernagel and J. P. Reeder to be grain inspectors, weighers and registrars. The Board contended that the appointments are unnecessary because the Board of Trade is willing to accept the grain inspection made by the dealers and its representative, Jas. F. Buckner, Jr., urged furthermore that the law authorizing such appointments is unconstitutional. Commissioner Rankin, in declining to accede to the request of the Board of Trade said that the law had been on the statute books since 1893 and its unconstitutionality has not yet been proven and that until it is so adjudicated he intends to obey its direction to appoint grain inspectors weighers and registrars.

The Wichita Board of Trade has established a call market for wheat to arrive, 3, 5, 10, 20 and 30 days' delivery. The call will take place between 1:30 and 2:00 o'clock p. m. each business day, bids being for Kansas City, Mo., No. 2 wheat with No. 3 to apply at 1c scale, Wichita weight and grades; to come from points in Kansas on the Rock Island, Herington south and west inclusive; from points on the Missouri Pacific, Herington south and west inclusive; from points on the Santa Fe, west and south of, but not including, Strong City; it being understood that when a party bids for wheat at a certain price, that he is to receive wheat from the above defined territory, and that Wichita weights and grades will be furnished on the transaction. Should a buyer bid, or a seller offer wheat from other territory, or on other terms, he must so specify at the time he makes the bid or offer, and it shall be termed as special prices and will not in any way

affect the general "Call" price, which shall be based on the territory and terms mentioned.

The board of managers of the New York Produce Exchange voted on December 2 in favor of becoming a member of the Council of North American Exchanges. In the opinion of Welding Ring, president of the New York Produce Exchange, says the Journal of Commerce, there are many important questions that require united action such as will be taken by a federation. Mr. Ring said also that all matters of federal and state legislation will properly come before the Council of Exchanges; likewise questions such as the inspection of grain; conditions of contract, calling of margins and of transportation.

OMAHA GRAIN EXCHANGE ELECTION.

The annual election of directors of the Omaha Grain Exchange took place on November 10, when Edward P. Peck of the Omaha Elevator Co., M. C. Peters of the M. C. Peters Mill Co., and C. E. Niswonger of the Middle-West Elevator Co. were elected. Subsequently E. P. Peck was elected president.

The result is said by the Omaha press to be rather that the grain men of Omaha have definitely "cut loose" from the jobbers and that the Exchange will hereafter stand on "its own footings." The Exchange is now five years old and the jobbers and business men of Omaha who have been holding office since the organization was effected are stepping out to permit the grain men to take charge.

BOSTON CHAMBER OF COMMERCE ON TAXATION.

The Boston Chamber of Commerce on November 16 adopted the following resolution:

"Resolved, That the Boston Chamber of Commerce favors the establishment of an independent, non-partisan board to investigate tariff matters and report to Congress and the President on proposed tariff changes, believing that tariff revision should be based on a thorough and scientific investigation of business and trade conditions, and that such investigation should be made as a preliminary to the discussion of tariff revision. We commend the establishment of a tariff board as an important step in this direction."

The taxation committee reported that it is of the opinion "that the assessment of a National income tax is an encroachment on the powers of taxation that have heretofore wisely been reserved for state and local revenues, and believes that the giving of such power to the national government should be limited in such manner that it can only be exercised in time of war or emergency." This proposition is to be discussed at the January meeting.

ANTI-CORNER AMENDMENT BEATEN.

The proposed amendments to the Rules of the Chicago Board of Trade to "put an end to corners," was defeated on November 23, when they were balloted upon, 763 votes having been cast.

One amendment (defeated by a vote of 357 to 409) provided that, "If a corner is run and there is a default in the contract, the president of the Board of Trade is to appoint a committee of three, members of the Board, this committee to be approved by the board of directors, and this committee shall say what the true commercial value of the commodity in question is on the day of the maturity of the contract. The price established by this committee will be the one upon which settlements are to be made."

The other proposed change (defeated by a vote of 345 to 423) provided for the expulsion of members or firms found guilty of manipulating the markets.

The amendments were opposed by both the speculative and elevator interests and many of the conservative cash houses also doubted the wisdom of the propositions.

Messrs. Pope & Eckhardt Co., in their daily circular of November 18, said: "The extreme dullness in the general trade is giving the members to discuss the proposed anti-corner rule. It is conceded that manipulation is baneful in its effects and that it interferes greatly with the natural flow of legitimate trade. The wisdom of the rule in question, however, because the trade cannot fail to recognize that in recent years the attitude of the producer in the more conservative marketing of his surplus grain has contributed much to the success of the bull deals. Legitimate enterprise and business must be fostered and stimulated in every possible way, but care must also be exercised that the speculative short seller is not given undue advantage."

W. S. Warren, of Hulburd, Warren & Chandler, an old member and a former president of the Board, in a circular letter said: "The proposed 'anti-corner' rule was thoroughly tried out years ago, in the early '80s, and was soon abandoned as worse than useless. We found we had to rescind it to save the market, and at that time Chicago was a natural grain market. Now it is not. It is maintained solely by reason of its pre-eminence as the world's greatest speculative grain market, and grain is forced here by the enhanced prices caused by speculative and investment buying, and this it is now proposed to discourage by hostile legislation. In any market there

should be no alternative but the fulfilling of contracts. Any effort by appeal to legislation to make prices, or to permit the qualification or abrogation of contracts, or to favor the short seller, is detrimental alike to the market and the producer, and discouraging to the buyer. And the first essential to any market is the buyer.

"In the rare event of a premeditated corner the proposed rule would prove to be a delusion and a snare, and, in all human probability, intensify the condition it is expected to ameliorate. Old members who can recall the scandalous developments growing out of the July wheat corner in 1882 under the operation of this very rule will hardly vote for its re-enactment.

"In my humble judgment the outright repeal of rule 23 would do more to prevent corners than the proposed amendment," says Mr. Warren. "Then shorts would not be encouraged to stand out until the last day, in the afternoon, before covering their contracts. The rule places a premium on defaulting—and where else in the commercial or financial world do we find such tender solicitude for defaulters? By what code of business ethics does a defaulter demand protection?"

NEW YORK COMMENT ON THE RESULT.

"The grain trade here," said the New York Journal of Commerce, "heard with much surprise the news of the defeat of the amendments." And the Journal adds: "Similar rules have been in effect on the New York Produce Exchange for a number of years. The one particularly applicable to 'corners' and 'short squeezes' reads: 'Rule 32.—Defaults.—In case any property contracted for future delivery be not delivered at maturity of contract, the purchaser shall notify, in writing, the committee on grain of the failure to deliver, and the committee on grain shall immediately hold a public call, at which they shall read such notice and buy the grain for account of the parties directing the purchase, but no unreasonable price shall be paid, arising from manipulation or fictitious markets, or unusual detention in transportation. Any legitimate loss resulting to the buyer shall be paid by the party in default, and the grain so bought in shall be a good delivery on defaulted contracts maturing that day.' The New York Cotton Exchange also has in force a similar 'anti-corner' rule."

The same newspaper further quotes "a well-known New York trader" as saying: "The only way to effect reforms of that kind is to obtain them through state or Federal legislation. Future trading in commodities should be prohibited. I believe this is sure to come in the legislation of the coming year. The movement of the Board of Trade, even though it was unsuccessful, is evidence of an awakening of the public conscience on this score. The object sought in this instance was not, of course, to prohibit future trading, but to so regulate it as to prevent artificial control, temporarily, of the grain and provision markets, when normal conditions should not warrant the prices demanded."

Upon which statement the Journal's market reporter comments as follows:

"Conservative students of market conditions, however, are rather averse to allowing the matter to be settled by the ordinary state legislator, who is apt to be swayed by popular clamor, and who is more than likely to produce a cure that shall prove worse than the disease. Any attempted regulation of commodity trading must be the result of expert analysis of conditions and cannot be disposed of by a mere decree. Undoubtedly many evils result from practices now in vogue, but the subject is one of perennial discussion, and attempts at legislation so far have not produced the results expected and have in instances been repealed after their futility has been demonstrated.

"In the case of the proposed amendments having been adopted, the trade here was interested in discussing the probable results under conditions similar to those existing at the conclusion of the so-called 'Patten deal' of last year. Mr. Patten vigorously asserts that his trading is based solely on the law of supply and demand. It will be remembered that he did not carry his May deal into that month itself, but that he sold most of his holdings about the middle of April. Those unlucky speculators who were still short on May 31 were able to cover their contracts at the then prevailing price, although it was in his power to have run it up to almost any figure. When Mr. Waterman, of Albany, perpetrated his surprise in July he ran the price up to a figure that suited him, but which was considerably in excess of Patten's.

"Were it not for the effect on the innocent consumer there would, of course, be little sympathy for the professional operator. It was argued that a speculator who sells short knows at the time that he is taking a gambler's chance and he has no right to 'squeal' if he loses. Mr. Patten asserts that he bought wheat and was willing to have it delivered to him, as he could have found a market for it, which later events proved true. Those who sold it to him without owning it had only themselves to thank for their subsequent predicament. On this statement of the case the question then became: Is the 'short' seller wickedder than the 'long' buyer, and should the

latter be punished for the sins of omission of the former? It should be added that although trading was very dull on the Produce Exchange on Wednesday, up to the close of business the question remained unsettled."

"Opinions differ," said Zahin & Co., "as to whether such a rule would increase or diminish trade in futures. Those against it said it would lessen the number of speculative buyers, especially the larger ones, all of whom have a perfect right to back up their opinion of future supply and demand. Those in favor of such a rule argued that it would make hedging safer; that during the past few years many large handlers of cash grain who must load up their elevators at harvest and sell a future in Chicago against it, have lost money on their hedges and didn't make it back on the cash article. The rule would have made hedging safer, and possibly on that account, might have increased trading in futures. However, a majority rules. It probably will be some time before a similar rule will be proposed."

[For the "American Elevator and Grain Trade."]

ST. LOUIS GRAIN AND FLOUR NOTES.

BY L. S. BREED.

A meeting of the "Kernels of Golden Grain Mercantile Club" will be held on December 20, under the auspices of the Grain Club of the Exchange, to "elucidate the eluensian and skirropharian mysteries." John L. Messmore is triptolaman.

For the past week Exchange politics have been engaging the attention of the active members, anent the approaching election, which takes place on January 5. The race for the presidency has simmered down to one candidate, Manning W. Cochrane, the present first vice-president. Mr. Cochrane is the head of the Cochrane Grain Company, one of the largest handlers of grain in this market. For the second place on the ticket Nat. L. Moffitt, now the second vice president, is the most likely candidate. Henry Greve, now one of the directors, is prominently named. An effort is being made to induce Chris Bernet to enter the race for first vice-president, and Henry A. Diamont is urged to allow his name to be presented for election to the board of directors. Following the usual custom, E. E. Scharff, now president, will be elected a member of the board of directors. Other names mentioned for the board are: J. J. P. Langton, C. A. Schreiner, C. F. Beardsley, G. L. Graham and F. L. Wallace. The Exchange now has about 1,600 members.

A vote was taken on November 10 on the question of allowing the use of "the weed" on the floor during the business session. The majority was against a change in the rule, and the smokers will be obliged to content themselves with their present quarters in the corridor.

The proposition to establish rates for the use of grain bags furnished by various members to shippers or customers also was lost at the same election.

Bert Lang recently was the recipient of a diamond watch fob from members of the Exchange as a testimonial of their appreciation of his work as chairman of the committee in charge of the Chicago trip a few weeks ago, which was followed by a meeting which resulted in the organization of a national association of grain exchanges.

Crossed wires are thought to have caused the fire which totally destroyed the Interstate Warehouse & Elevator at Third Street and St. Louis Avenue, East St. Louis. The fire started in the cupola, 105 feet high, being the highest tower in the city. The damage to building and contents is estimated at \$35,000, fully covered by insurance. The elevator had just been rebuilt after being burned in a similar manner last April when the loss was \$50,000. Edward E. Felkel, of Ferguson, Mo., is president, and S. Lee Elliott, of St. Louis, secretary-treasurer.

P. J. Farrell, of Washington, D. C., attorney for the Interstate Commerce Commission, recently arrived in St. Louis. The suits brought by the Missouri River boards of trade and grain houses, known as the "elevator cases," have been called in the United States Circuit Court and a date set for the hearing. An appeal, if taken, goes to the Supreme Court. There are two cases—one filed by the Boards of Trade of Kansas City, St. Joseph and Atchison, and the Grain Exchange at Omaha; the other by the Peavey Grain Company, which operates in Kansas City, Omaha and Council Bluffs. They sued to enjoin the Interstate Commerce Commission from enforcing an order issued on complaint of the Merchants' Exchange of St. Louis. This exchange complained that the Missouri River railroads made an allowance of three fourths of a cent on grain in favor of Missouri River towns, thus favoring them over this city. The date set for the hearing is January 24.

The first dinner of the season of the St. Louis Grain Club was given recently at the Mercantile Club, with about sixty members present. It was made a Thanksgiving event, and the table decorations were unique. Five huge pumpkins were used as a centerpiece, decorated to represent a huge head with a lobster claw for a nose and leek roots for a beard. At each plate a smaller pumpkin was

placed, also imitative of the head, and in all lighted candles were placed. The banquet room was darkened and the members admitted by pumpkin candle light.

The St. Louis Millers' Club gave its annual Thanksgiving dinner at the Mercantile Club, and combined with it "railroad night," the speakers being chosen from among the traffic men of the city.

The stock of flour on hand in St. Louis December 1 was 72,070 barrels.

Edward C. Chamberlin, president of the E. C. Chamberlin Commission Company, died at his home in Webster Groves, December 9. Mr. Chamberlin was in the grain commission business in this city for about forty-seven years. He entered the commission firm of S. M. Edgell & Company in 1862, and at the death of Mr. Edgell went into business under the name of E. C. Chamberlin Commission Company. He continued in active business up to about a year ago, when he virtually retired, although he kept his office in the Chamber of Commerce building. Pall-bearers will be selected from among Mr. Chamberlin's former business associates to represent the Exchange at the funeral.

A BOARD OF TRADE BASE BALL NINE.

All grain men visiting Chicago the coming winter are cordially invited to witness the indoor base ball games of the Chicago Indoor Base Ball League. The series began on November 1 and will end February 21, 1910. Games are played at No. 311 Wabash Avenue and at Battery B, Lincoln and Fullerton Avenues. The season will comprise fifty-six games.

The accompanying picture shows the team of Rosenbaum Brothers. Of this team James A. Adam



ROSENBAUM BROTHERS INDOOR BALL TEAM.

is manager and Geo. Newman, captain. They have given a good account of themselves thus far in the season; and if no one else does, they will surely take down the pennant.

The following schedule gives the names of the teams playing, with place and date up to the close of the season. Games marked with affix * are to be played at No. 311 Wabash Avenue; all other games will be played at Battery B, Lincoln and Fullerton Avenues:

Dec. 16—Peavey Grain Co. vs. Finley Barrell & Co.
Dec. 20—Bartlett, Patten & Co. vs. J. Rosenbaum Grain Co.
Jan. 4—S. B. Chapin & Co. vs. Armour Grain Co.
Jan. 5—E. W. Wagner & Co. vs. Peavey Grain Co.*
Jan. 6—J. Rosenbaum Grain Co. vs. Finley Barrell & Co.
Jan. 10—Bartlett, Patten & Co. vs. Rosenbaum Bros.
Jan. 11—S. B. Chapin & Co. vs. J. Rosenbaum & Co.
Jan. 12—Armour Grain Co. vs. Finley Barrell & Co.*
Jan. 13—E. W. Wagner & Co. vs. Bartlett, Patten & Co.
Jan. 17—Peavey Grain Co. vs. Rosenbaum Bros.
Jan. 18—Armour Grain Co. vs. J. Rosenbaum Grain Co.
Jan. 19—S. B. Chapin & Co. vs. Finley Barrell & Co.*
Jan. 20—Peavey Grain Co. vs. Bartlett, Patten & Co.
Jan. 24—E. W. Wagner & Co. vs. Rosenbaum Bros.
Jan. 25—Bartlett, Patten & Co. vs. Finley Barrell & Co.
Jan. 26—Peavey Grain Co. vs. Armour Grain Co.*
Jan. 27—Rosenbaum Bros. vs. J. Rosenbaum Grain Co.
Jan. 31—E. W. Wagner & Co. vs. S. B. Chapin & Co.
Feb. 1—Rosenbaum Bros. vs. Finley Barrell & Co.
Feb. 2—E. W. Wagner & Co. vs. J. Rosenbaum Grain Co.*
Feb. 3—Bartlett, Patten & Co. vs. Armour Grain Co.
Feb. 7—Peavey Grain Co. vs. S. B. Chapin & Co.
Feb. 8—E. W. Wagner & Co. vs. Finley Barrell & Co.
Feb. 9—Rosenbaum Bros. vs. Armour Grain Co.*

Feb. 10—Peavey Grain Co. vs. J. Rosenbaum Grain Co.
Feb. 14—Bartlett, Patten & Co. vs. S. B. Chapin & Co.
Feb. 15—Peavey Grain Co. vs. Finley Barrell & Co.
Feb. 16—Bartlett, Patten & Co. vs. J. Rosenbaum Grain Co.*
Feb. 17—E. W. Wagner & Co. vs. Armour Grain Co.
Feb. 21—Rosenbaum Bros. vs. S. B. Chapin & Co.

CHANGES IN EXCHANGE MEMBERSHIP.

Chicago.—Sec'y Geo. F. Stone reports the following changes in the membership of the Chicago Board of Trade taking place in November: New members—Thomas J. Sullivan, 647 Postal Telegraph Building; John H. Ashum, 1 Board of Trade; Elliott M. Taylor, 74 Broadway, New York; J. H. Packer, 3 Board of Trade; Henry Ellsworth, 630 Postal Telegraph Building; Percy Andreas, 1530 First National Bank Building; David K. Reed, 202 Chamber of Commerce, Boston. Withdrawn—A. B. McCue, J. H. Banta, Walter H. Latimer, H. H. Ellsworth, Theo. Oehne, Chas. F. Chapman, B. F. Striblin, Jos. T. Talbert, H. C. Knoke, Geo. B. Parkins, Ira N. Morris, Walter C. Hoff, H. L. Randall.

Duluth.—Chas. F. MacDonald, secretary of the Duluth Board of Trade, reports R. C. Bagley, Minneapolis, Minn., as a new member of that Exchange.

Milwaukee.—H. A. Plumb, secretary of the Milwaukee Chamber of Commerce, reports that in November Frank E. Crandall of Mankato, Minn., was elected to membership in that body, and that the membership of F. R. Morris, F. W. Haseltine, R. W. Dillon, Geo. A. Curry and J. W. Simpson were transferred, the last four under the rule published in this place in the November issue, to present members.

New Orleans.—Sec'y H. S. Herring reports that Jake F. Goldsmith of the Burkenroad-Goldsmith Co. has been elected to a full membership of the Board of Trade, and James C. Harvey of the Harvey-Faust Brokerage Co. of St. Louis to a visiting membership.

Omaha.—F. P. Manchester, secretary of the Omaha Grain Exchange, reports that Messrs. J. A. Bushfield and T. A. Anderson were admitted directly to memberships during the month of November, and Messrs. J. F. Gloe, L. P. Roberts and J. A. Ellis admitted on transfer of the memberships of E. E. Bryson, Jas. Swanick and E. R. Beem, respectively.

St. Louis.—Secretary Geo. H. Morgan reports the following admissions to membership in the St. Louis Merchants' Exchange during November: C. G. Welter, with Langenberg Bros. & Co. of St. Louis; C. A. Welden, grain dealer at Laddonia, Ill., and Geo. W. Cole, grain dealer, Bushnell, Ill.

WEIGHMASTER FOSS'S ANNUAL DINNER.

"Christmas comes but once a year" and so does the annual dinner of H. A. Foss, chief weighmaster of the Chicago Board of Trade, to his men of the weighing department. The two are never far apart, and each proclaims and spreads abroad the spirit of "Peace on Earth, Good Will to Men." It can be doubted if this spirit ever leaves the weighing department. Men like Metcalf, Saunders, Boden, Robinson never get very far away from the kingdom anyway; and when inspired constantly by their illustrious leader it does not need a holiday spirit to bring out the best that is in them. The best is there all the time.

The eighth annual dinner has taken place, and is a matter of history. It was given at the banquet hall of the Palmer House on the night of December 11, and only one deputy weighman was absent, Michael Hawkins, and sickness prevented his attendance. The number of guests seems to increase every year. Whether this is due to demand for places at the table at the banquet or to Mr. Foss's constantly increasing hospitality, may not be said. But this year a very large number enjoyed the dinner, seated not only at the speakers' table but also at outlying tables among the deputy weighmen.

The dinner itself was a fine one, but really so non-essential in comparison with the feast of reason which followed as to be scarcely worthy of mention. However, the menu was excellent, the tables were banked with American Beauty roses and just in front of Weighmaster Foss was a balance scale decorated with flowers.

It was 9:30 o'clock when Mr. Foss arose and rapped for order with these words from the menu card: "What news, gentlemen? Have you any news for after dinner? Methinks we should not spend our time unprofitably." For myself, he said, I have to report that the work of the department the past year has been exceptionally good. The financial side has not been so good, as there has been a deficit. We have with us to-night as guests many of our old friends and new ones, from almost every walk of life. We have railroad men, claim agents, ministers, judges, lawyers, millers, grain men, scale men, and even a wagonmaker. From way down in Egypt, the Egypt in the southern part of our state, there has come a man who as I have found has the right stuff in him, and I will call on Deputy A. F. Robinson to make the address of welcome.

Mr. Robinson said in part: We held our first dinner at the Wyoming Hotel seven years ago. How the time flies! In behalf of the weighing department it gives me great pleasure to bid you all a hearty welcome. It seems to me appropriate that I say a few words about our annual dinner. The meetings promote harmony, good fellowship, and it is with real pleasure in our hearts that we shower a welcome on you.

A. E. Schuyler, assistant weighmaster, read letters of regret from S. S. Tanner of Minier, Ill., and Deputy Weighman Michael Hawkins. After the rendition of a selection of national airs by the Deputy Weighmasters' Orchestra, conducted by John Link, the entire assemblage arose and sang "My Country, 'Tis of Thee."

Mr. Foss then introduced the next speaker, Mr. Ingram E. Bill as a man who narrowly missed being a Yankee, having been born in Nova Scotia, next was a resident of Boston, and now a citizen of Chicago.

Mr. Bill began by stating that the Palmer House dinner had completely "filled the Bill." He spoke of adhering to the policy of good goods and full weights and of things that never grew old—the old flag, the old home, old friends, the old Book. He left this thought in closing, "Smile, hoost and don't worry."

Mr. Foss then introduced Deputy Wm. J. Saunders, who addressed the weighmen and guests in the following:

"When Mr. Foss asked me to prepare a talk for this occasion, I was agreeably surprised, and I willingly consented to do so. I said to myself 'Gotrox, here is a golden opportunity. Now is your chance to Chauncey Depew the Weighing Department.' But, alas, when I began the task of preparing my piece I could think of nothing appropriate to say. As Cato once remarked: 'All have the gift of speech, but few are possessed of wisdom.'"

"In a word, I felt that I was up against the real thing. I then naturally, just like any other faithful employe under similar circumstances, turned to that great work, the greatest of all publications—you've all read it—"The Shippers' Manual," compiled by H. A. Foss, Weighmaster; A. E. Schuyler, Assistant Weighmaster; and I selected from it a chapter entitled, 'Cloth, an Insurance Against Leakage.' But here my courage failed me, and my conscience cried out: 'Would it be right? Would it be honorable, to appropriate, as my own, the words of these great men?' I tell you I was discouraged. You know Cowper once remarked:

"Words learned by rote a parrot may rehearse,
But talking is not always to converse."

"However that may be, I am here to talk. Unfortunately, Mr. Foss did not tell me what to talk about, and when I asked him he grew very poetical. You know Mr. Foss is very fond of poetry. It is music to his soul. Well, as I was saying, when I asked him what I should talk about he burst forth in a sweet poetical strain, and musically cried: 'William (he usually calls me Bill), William,

"A little nonsense, now and then,
Is relished by the best of men."

"Now, that may be very pretty and all that, but I want to tell you that a little, good, old-fashioned prose, in the good, old-fashioned way, would have been a lot more help to me in framing my talk."

"At our last annual dinner, many of you will remember, Deputy George Metcalf told us a very pathetic and heartrending story about a man who went to war and never came back. It filled us all with sadness. It wasn't the story that affected us so much; it was the way he told it. In preparing my talk, I thought long and seriously of Metcalf's tale of woe, but I finally passed it up, for I was afraid that any such kind of noise from me would not be fully appreciated."

"I then turned to Burns' sweet little poem—the one Deputy Robinson so beautifully and so ably recited at our banquet some two or three years ago. Do you remember, boys, how he so dramatically brought out the meat of the piece. Ah! Such expression—how it thrilled us. I can see him now."

"It was at this point that I began to wonder why Mr. Foss had selected me to talk. I then reviewed in my mind the marvelous talent on the weighing force, now lying dormant, which would have shown here to-night if only it had been given an opportunity."

"Right here, for the purpose of future reference, and for the benefit of Mr. Foss and his assistant in arranging other programs, I am going to make a passing mention of just a few of our deputies, celebrated men, if you please, right royal entertainers, every one of them, who are artists in their particular line."

"As I said before, Mr. Foss is very fond of poetry, and in order to satisfy, so to speak, his appetite for the muse, I have put into verse my mention of the weighing department's most famous men, and their various talents. You know Dryden once wrote:

"A poet is a maker, as the word signifies;

And he who cannot make, that is invent, hath his name for nothing."

Mr. Saunders in crisp lines then noted in harmless hadinage some of the personal characteristics of many of the employes, which created no end of laughter.

After a trombone solo by Deputy Otto Schmidt, Mr. Foss introduced John A. Bunnell, president of the Board of Trade, as representing the great packing house industry of the Board.

Mr. Bunnell stated that the Chicago Board of Trade was very proud of its weighing department. Such an assemblage, he said, was a great revelation to him, and the thought occurred to him that in these days of legislation inimical to the Board, if he could have a marching club of the weighing department go to Washington it would have a good effect down there. He spoke, also, of the strong men of the Board: Secretary Geo. F. Stone, in the harness for 25 years; Mr. Powell, head of the Clearing House Association; John A. Toby, registrar; and that these men, with men like those of the weighing department, combined to make the future of the Board a very great one.

Deputy Duncan Boden asked for recognition and presented to Wm. Saunders a large, handsomely heribbioned megaphone, with some lively hints as to when, where and how the instrument should be used.

Mr. Saunders thanked his friends for the gift.

Mr. Foss then introduced Judge F. L. Fake, who had a number of "don'ts" for the boys, each one of which he illustrated by a humorous story.

Judge Walker made a short talk in which he commended his friend, Mr. Foss, and also the department.

Then Deputy Boden spoke of the Book that was presented to Mr. H. N. Sager last year and said that the boys would like to have Mr. Sager give an account of its use.

Mr. Sager said that the Book is now one of the treasures of the Sager household. He never could tell them, he said, how much he had enjoyed the privilege of their hospitality. It had not only been a great pleasure but a great inspiration. The result of this inspiration was that the annual dinner made for better citizenship, one of the greatest needs of our municipalities to day. There has swept over the country a just demand for higher ethics, but the great menace to popular government was that after the first cry there came apathy. When men like Francis J. Heney of San Francisco and Judge Lindsay of Denver could be overthrown and trampled upon by the "rings" it was time for all good people to "sit up and take notice." It is evident that never was the demand greater for good citizenship, and it is because such meetings as this promote good citizenship that I am glad to be with you.

Geo. D. Montelius of Piper City, Ill., president of the Illinois Grain Dealers' Association, was the next speaker. Mr. Montelius said that he had no complaint to make of the weighing department from the shippers' standpoint, as it has the confidence of all shippers. He suggested that a report be sent as to good order cars as well as bad order cars. He was sorry that the department would meet with a deficit this year and expressed the opinion that the shipper did not object to paying for the service.

The following were seated at the speakers' table: Messrs. W. L. Shellabarger, S. W. Strong, H. I. Baldwin, H. A. Hilmer, G. D. Montelius, H. Kirtland, F. M. Bunch, Ingram E. Bill, H. N. Sager, J. C. F. Merrill, Jas. Bradley, J. A. Bunnell, H. A. Foss, Ed. Andrew, F. Rice, H. Boore, J. C. Murray, Judge Walker, I. P. Rumsey, S. Smith, Messrs. Hoit, Creighton, Mageley, Osman, Church, Pierson, Kennedy.

[For the "American Elevator and Grain Trade."]

SUGGESTIONS TO EXCHANGES.

BY L. C. BREED.

1. The term "broker" should be changed or dropped. Properly speaking there are no brokers now on the exchanges. Such men are doing business as the agents of either the seller or the buyer. The original meaning implied a party acting in an unbiased manner as the medium through whom the transaction was consummated. If a man's card bore the legend "commission," it would be a fairer description of the nature of his business.

2. The visitor to some churches will observe on the wall one or more texts from the Scriptures. This practice might well be adopted by the exchanges; and there would need be but one motto which should be placed at the entrance to the trading room, viz., the Golden Rule. Strict observance of this law would render it possible to do away with all others.

3. Arbitration should be made compulsory where the sum involved as a claim or an accounting is less than say \$300. No man should be made a member of the arbitration committee unless he has had at least ten years of board of trade experience.

4. There should be but three grades of grain: (a) fancy, to be sold as sample and all mixed grain should be sold by sample; (b) merchantable grain; (c) unmerchantable grain. The rules should be

changed to provide for this grading. It is a well known fact that a Chicago house has built up a successful business in milling wheat, though selling by a brand, or private grading.

5. Be sure the exchange members are getting rates, both inbound and outbound, which put their market on a parity with others. If discrimination exists in any direction find out why and seek to remove it.

6. Treat the railroad officials fairly and courteously. Abandon the habit of making claims for petty losses. Ascertain positively if the railroads are at fault before complaining.

7. Advertise the exchange as a body of reliable and competent business men in the leading grain, flour and feed trade journals.

8. Maintain and sustain a freight bureau.

9. Use more care in respect to the admission of members in point of character.

10. Enforce trading floor rules for preventing horse play.

11. Hold open meetings of the members oftener. Abandon committing the exchange by action of the board of directors on any public question of importance.

COMMISSION

J. H. Ware of Ware & Leland, Chicago, has been elected to membership on the New York Stock Exchange.

C. R. Clark, grain merchant of Chicago, devoted one week's commissions recently on all grain shipped, to the fund to aid the widows and orphans of the miners at Cherry, Ill.

C. S. Schneider who has been in charge for some years of the cash grain department of E. W. Wagner of Chicago severed his connection with the firm December 1 and will engage in business on his own account.

The Baker Commission Co. has been incorporated at Duluth, Minn., to deal in grain and other products. The incorporators are B. E. Baker, president; Peter McTague, vice president and treasurer, R. M. Morgan, secretary. The capital stock is \$50,000.

The Weber Grain Co. of Kansas City, Kan., suspended business early in December, and its business was bought by Bruce Detrich, manager of the Kansas Grain & Stock Company. The Weber Grain Co. will be operated hereafter as the Wyandotte Grain Company.

H. H. Randolph, who has for about fourteen years operated a line of private wires at different points in Central Illinois has opened an office at 1015-1016 Corn Exchange Bank Building, Chicago, and will handle his country trade in grain and stocks through his central office.

January 5 the annual election of officers on the St. Louis Merchants' Exchange will take place. It is probable that Manning W. Cochrane of the Cochrane Grain Co., will be elected president, as it is customary for the first vice president to succeed to the office of president. E. E. Scharff, the present executive, will retire and, following the usual custom, become a director.

The firm of Alder & Stofer of Buffalo, N. Y., was succeeded in November by the Alder Grain Co., which will carry on a general receiving and shipping business as formerly. The Alder Grain Co. will operate a branch office at Indianapolis, Ind., which will be in charge of F. G. Heinmiller, formerly the well known grain dealer of Lafayette, Ind. It will also operate an office at Lafayette, Ind., under the personal management of W. W. Alder, senior member of the former firm of Alder & Stofer. The main office at Buffalo will be under the personal management of T. J. Stofer, who has had the management of the firm of Alder & Stofer. The Alder Grain Co. will give especial attention to the handling of consignments at all three places, and with its increased facilities offers exceptional service to its shippers.

The Harry W. Kress Company has been incorporated at Piqua, Ohio, to carry on a general grain business. The capital stock is \$50,000, and the incorporators are Harry W. Kress, J. F. Coppock, G. M. Pepper, A. S. Clouse and M. W. Miller. Briefly, this means that Mr. Kress, who is well known in Ohio, has incorporated his track buying business which will be conducted as in the past, only on a larger scale. It is the plan to allow country shippers of Ohio and Indiana to become stockholders and the amount of stock issued will allow about 230 shippers to become such, the maximum amount of stock issued to any one elevator being limited to four shares at \$50 per share. Mr. Kress handled over 1,700 cars of grain and hay the past year and with the desirable grain and hay outlets and connections that he has established it is the purpose to make the new company one of the strongest and best in the Middle West.

A farmer near Dayton, Wash., claims a yield of oats (on a small patch) a little better than 156 bushels per acre.

FIELD SEEDS

This is the farmers' "seed fair" season in Canada.

Prof. Michael, corn breeder for Russia, has sent to Minnesota an order for seed corn for his development purposes.

The people of Stevens County, Minn., in spite of the county auditor's dictum, have decided to pay the amounts due on their seed grain loans by the state some years ago.

Schindler & Co. have incorporated at New Orleans with \$5,000 capital stock to handle seeds. James Barrett is president, Albert H. Schindler, vice president; Louise Schindler Barrett, secretary-treasurer.

Four cargoes of new crop Argentine flaxseed have been sold for shipment to the United States. The first sale of 8,000 tons, or 320,000 bushels, was completed Friday from Buenos Ayres to New York, at \$1.57 to \$1.58 c. i. f. New York, January-February shipment.—Record-Herald.

A pure seed laboratory will be established at the Minnesota Agricultural College with E. M. Oswald, assistant botanist at the College, in charge. Mr. Oswald recently went to Washington to study the Agricultural Department's methods and on returning home took with him a very large and complete collection of standard seeds for comparative purposes.

Consul Horace Lee Washington reports that several British firms displayed in the Liverpool office of a large shipping concern samples of soya-bean products to be sent to the Calabar and Lagos agricultural exhibitions, in order to encourage the cultivation of these beans in West Africa for sale in Liverpool. The samples consist of edible and crude oil, flour (for bread making), meal, biscuits, oil cake, soap, and a substitute for coffee.

It appears that R. Vogel, of Bozeman, Mont., who was credited in this column last month with a yield of 480 bushels of 40-pound oats from 2½ acres, is a grower of the Garton-Cooper Seed Co.'s oats, the seed being their Regenerated Swedish Select Oat. The company named received Mr. Vogel's report on November 16. He reports 488 bushels of 43-pound oats. This is so exceptionally large a yield that they have written him to further verify his statement.

Northrup, King & Co., of Minneapolis, wholesale dealers in seeds, will establish a western headquarters at Billings, Mont., and M. B. Gray, a representative of the firm, remains there permanently for the purpose of signing contracts for the raising of seed next year and attending to the company's business in its Billings office. They will, during the first year in the Yellowstone Valley, make a specialty of pea seed and to that end Mr. Gray will obtain all the contracts he can for next season's crop.

A sample of Manchurian beans was shown in Chicago the other day by E. H. Bingham, having been lately received from an English firm. There are 1,000,000 tons of these beans to be shipped from Manchuria to western Europe this year, representing the equivalent of 40,000,000 bushels of corn, which the beans will displace. The exportation of beans on this large scale is comparatively a new business. The beans are small and round and resemble American field peas in size, but are brown in color.

Arrangements have been made under the New Hampshire pure-seed law to have samples of seeds tested at the Experiment Station at Durham at a nominal cost, and all the regulations, including a copy of the law, can be obtained by addressing the Secretary of the State Board of Agriculture at Concord. In making reports of tests, all seeds other than those of the variety under examination found in a sample will be considered as foreign seeds and therefore as impurities. Dirt, stems, hulls, sand, etc., will also constitute an impurity under the term "inert matter." While other kinds of grass seed found in a given sample constitute an impurity, their presence there may not be harmful or even objectionable. In view of this fact, the reports of inspection will have the total percentage of impurity divided into percentage of inert matter, percentage of other grass seeds and percentage of weed seeds.

John Sunberg of Des Moines, Ia., president of the Iowa Corn Growers' Association, produced on one acre of his farm at Whiting 153 bushels and 55 pounds of corn. This feat was accomplished by Mr. Sunberg's man, and the first intimation of the fact reached him in the form of an affidavit made by Roy Atwood, justice of the peace at Whiting, in which he swears that he personally measured the ground and weighed the corn and found the yield to be more than 153 bushels. Atwood also supervised the husking and watched the growth of the corn. The corn which is believed to have carried off all acre yield records was raised on a patch of an acre and a half. The acre and a half produced 224 bushels and 40 pounds. No one connected with the Iowa Corn Growers' Association knew of any record that approaches the one made

on Sunberg's farm. But Mr. Sunberg's man is beaten by a North Carolina man, J. F. Batts, Garner, who swears to a yield of 226½ bu. on a single acre.

Picard & Co., London, under date November 15, say that, "There is a steady business passing in spring sowing seeds, including the clovers and grasses. The new crops of red are coming out more freely. English seems ruined, but Russian and Hungarian are fair; Chilian good; French and German below the average. Prices rule high. Alsikes show fine samples with reasonable prices. Whites—yearling samples fine, new seed poor quality, prices high. Trefoil is scarce and high in price; grasses, fine samples, unchanged prices.

The Maine legislature having last winter made an appropriation in aid of improved seeds of all kinds for agricultural purposes, it is now proposed to call a meeting of such farmers of the state as may be interested in seed improvement work of any kind, at which time the advisability of organizing an association for the purpose of directing this work will be considered. The Department of Agriculture has expressed its willingness to give assistance in the organization and direction of such an association, so far as is desired. It is prepared to furnish to the members experimental lots of different kind of seed to test out in comparison with the seeds they are already using.

Dr. Geo. M. Chappel, section director of the Weather Bureau, stationed at Des Moines, has reported that information received by him from over 700 crop reporters of Iowa indicate that the freeze of October 12-13 seriously damaged, and in some localities killed, the germ of corn. He estimates the extent of damage at 50 per cent. Some counties in the southern and southwestern districts report 80 to 90 per cent of the germs killed. Dr. Chappel says this is the worst condition farmers in Iowa have been menaced with in many years. The great danger is that farmers will persist in picking out fine looking ears that appear all right, but the kernels may not germinate in the spring. Chairman Cowrie of the Iowa Board of Control thinks the trouble is not so much in the corn itself as in the manner in which it has been handled. He has therefore tested many specimens of seed corn picked prior to October 1 and finds it all right; but he admits that the corn which was gathered after the heavy frost and not properly handled afterwards is not doing as well as the earlier-picked corn. Part of the stalks are tall, others are not; part of them grew and others did not even sprout.

SOME OMAHA PRIZES.

The grand sweepstakes prize for corn at the National Corn Exposition, Omaha—the \$1,000 Kellogg trophy for the best single ear—was given this year to Fred C. Palin of Newtown, Ind., while to J. R. Overstreet of Franklin, Ind., was awarded the \$1,000 silver trophy offered by the Indiana Corn Growers' Association for best ten ears; and G. L. Kerlin of Franklin the prize for the best bushel.

The highest prize for wheat went to Wisconsin on a specimen of Turkey Red winter.

The oats prize—the \$1,500 silver Olen hopper—went to Minnesota.

AGRICULTURAL DEPARTMENT AND OATS.

Speaking recently about the movement for the improvement of seed oats, in connection with the work of the Garton-Cooper Seed Co., it was said by this paper that, "The United States government has done much in the way of selection of seed, and called it breeding, but has really done nothing in the way of really breeding oats." The same statement has been made also by so good an authority as the "Speculative Gossiper" of the Record-Herald. This is hardly fair to the Department; and we therefore hasten to correct the error, being informed by the Garton-Cooper Seed Co. that, "The Department at Washington has been very kind to our proposition, and gave us a very strong indorsement upon opening our branch in this country. Further, they have done some very effective work."

THE CORN SHOWS NOW ON.

The Louisiana Corn Growers' Association has been organized with W. E. Glassell of Shreveport as president, W. R. Dodson of Baton Rouge as secretary-treasurer, and the following vice presidents by congressional districts: John Dymond, first; Henry Fry, second; Chas. V. Moore, third; L. P. Frierson, fourth; J. D. Calhoun, fifth; Harold McVea, sixth; G. P. Sentell, seventh. A committee on standards was appointed.

The Delaware Corn Growers' Association held its annual show at Dover on November 18.

The Ohio State Board of Agriculture will have a corn show at Columbus during "Farmers' Week" in January, beginning January 3. The State Farmers' Institute will begin on January 4. The corn show will be held in the F. & R. Lazarus Co.'s new building at Town and High Streets.

The Nebraska State Corn Growers' Association corn show will be held at Lincoln in the Auditorium

on January 17-21. Attention will be paid this year to wheat; and in addition to the Millers' State Association trophy several cash prizes will be given to exhibits of that cereal.

The Maryland Cereal and Forage Crop Breeders' Association's annual show was held at Baltimore on December 1-3, and was quite successful.

The Tennessee Corn Growers' Association, under the direction of Frank D. Fuller of Hermitage, has prepared a fine corn exhibit for the Omaha National Corn Show. The association was organized only about four months ago and has already become a factor of the agriculture of the state.

Corn growers' clubs are being organized in various parts of the state of Mississippi.

The Omaha National Corn Exposition is about over, having begun on December 6. Tomorrow, December 16, is "Grain Dealers' Day," when a large delegation of dealers from all the corn belt, and especially from Illinois, Iowa, Kansas, Missouri and Nebraska, will no doubt be present.

THE CLOVER MARKET.

Toledo bulls feel confident that present prices are none too high, figuring that farmers have let go all they can afford, that stocks at market centers are none too big to supply the spring demand that is bound to come. Bears are just as confident that prices are too high, say cash demand is poor and that the South is underselling all other markets; figure that Europe's wants will be practically nothing, that the East is full of seed and can see no outlet for surplus; that stocks in Toledo are at least 10,000 bags more than a year ago while prices are about \$3.50 higher.—Zahm & Co., December 4.

Clover seed has gained friends this week at Toledo. Large stocks here have made the local dealers bearish. Eastern buyers have been encouraged to wait, but some are waking up. They hardly appreciate the crop failure in Ohio and Indiana. The receipts of old seed have made them feel that there was plenty. Some large dealers are changing their mind. They find foreigners have no surplus, but may want some of ours. Speculation is quiet, but the bulls are hopeful. They think March will pass ten dollars before January. A steady to firm market for a while would inspire confidence. Receipts this week have been small, mostly to fill old sales.—C. A. King & Co., December 4.

King & Co.'s American correspondents write: "There is no question in our minds but that the world's crop of clover is the smallest one produced in many years. It's a question whether enough was carried over from previous years to fill the demand. There certainly will not be much left, and believe present prices justified. Large Eastern dealer writes: 'We feel very friendly towards clover. In former years we have always by this time been pretty well stocked up with seed. The people we have been buying from heretofore are offering but very little, and their prices are above the market. Some report they will have none at all to spare. We think will have to rely on Toledo for large part of our supplies this season, considerable more so than for several seasons. From the tone of our correspondence, we feel we will have more of a demand than for several years. We don't believe there was anywhere near the old seed carried over that has been figured on; at least we fail to locate it. To us everything points to considerable higher prices in the very near future.' Hamburg dealer writes: 'South Russian crop promises smaller than expected with offerings higher. Northern France has no exportable surplus and has to buy from Southern part. French crop only fifth average and carry over nearly all sold. German crop very small and imports will be unusually large. Arrivals have been rather free, due to early threshing, but prices have declined only a trifle.'

L. F. Miller & Sons, Philadelphia, write: "Our advices are that the crop of clover and timothy seed in the East is a very short one and the quality very poor, considerable seed will be needed during January and February. A number of our seed people are storing seed in Buffalo for distribution East."

A European correspondent writes Zahm & Co.: "English crop complete failure; requirements extremely large. Germany, only few scattered sections have harvested insignificant quantities. This country has to import seed, a great amount of seed as was not required for quite a long time. Bohemia and Moravia, crops nearly total failure, Australia must import heavily. Hungary, weak crop, exporting some cheaper grades but later will import better qualities. Poland and North Russia must import owing to failure of crops. South Russia crop has been overestimated; yield is good but not so enormous as was anticipated. Available supplies scarcely suffice to fill extremely big European requirements. Italy, very light, new crop. Chili, half an average output. France, one-quarter of an average yield; old supplies nearly exhausted."

A large clover-seed firm has expressed the following views on the situation to the New York Journal of Commerce: "We may be wrong, but we are beginning to change our opinion on red clover seed and been rather bearish, but think now in all probability that the seed is going to be wanted."

The foreigners evidently have no seed to spare us. On the contrary, it looks to us at present as though they would in all probability need to draw more or less of their supply from this side. On account of the high prices ruling we do not think the jobbing trade in this country have stocked up as much as usual at this season, which should give us a very healthy market. Supply at interior points rapidly diminishing and it does not appear at present as though there was very much more to come in either new crop or old. We feel quite confident if your market holds firm for another week or ten days the jobbers in this country will begin to take hold."

SUMMERS SEED HOUSE.

A new seed house is now under construction at Malvern, Iowa, by the Younglove Construction Company for the Summers Seed House, dealers in pure bred grass, grain and garden seeds, a reproduction of the architect's drawing for which appears herewith.

The cribs hold 8,000 bushels of ear corn, and are supplied with hopper bottoms and a chain-drag conveyor which empties the corn upon the sorting belt, where the seed corn is picked out. The refuse corn goes on into the sheller, which spouts it into the dump, where it is elevated and loaded into cars and shipped out.

The working house is 24 feet wide and 68 feet long. Above this is the machinery for manufacturing corn meal, buckwheat and graham flour, and also for custom grinding. The whole plant is so arranged that nothing will have to be handled by hand after it leaves the wagon.

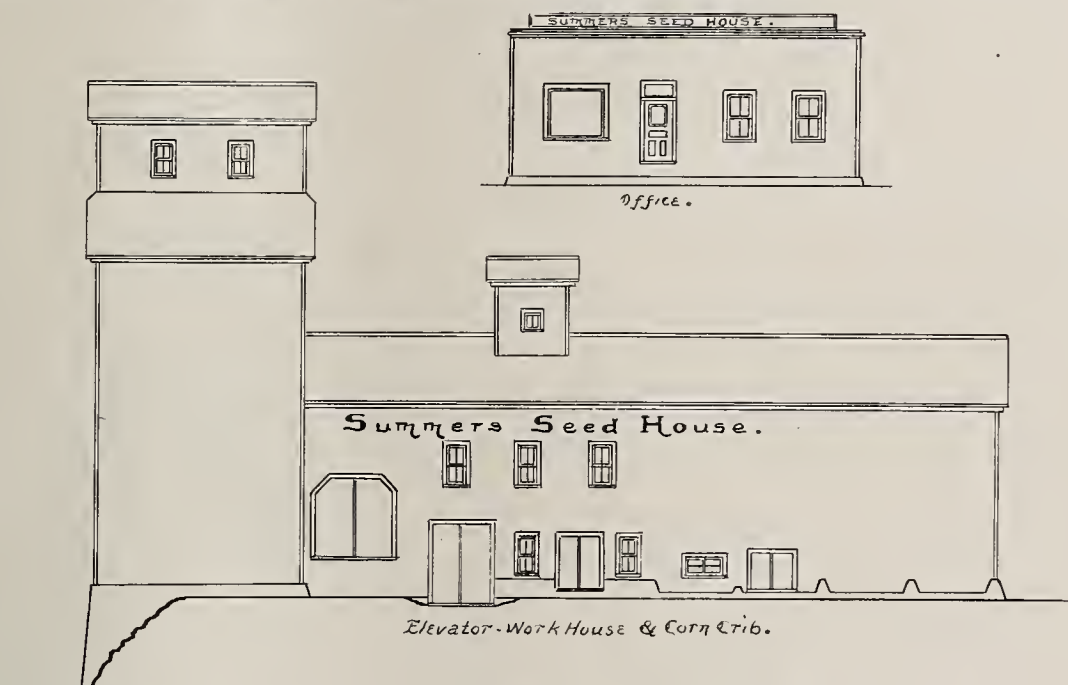
The elevator is 24x24 ft. in size and has a storage

their rules for grading and selling a jobber would, on order, ship a carload of beans to, say, Baltimore. When the car reached Baltimore the price might be lower than when the order was given, and the consignee, if he had lax ideas of business morals, might refuse to accept the car, on the pretense that it was not up to the standard he bargained for. When that happened, there was no alternative for the jobber, except to take back the car, or sue. It is different now. Seven different grades of beans have been created. Mr. A., of Cincinnati, bargains for a carload of 'fancy screened Michigan pea beans,' we will say. But, before the carload is started for Cincinnati Mr. A. must sign an 'official sales contract' of the Michigan Bean Jobbers' Association. This means that he binds himself to submit to arbitration any and all questions of dispute. If he is disinclined to accept the car on its arrival, a disinterested person draws a sample from the car and sends it to E. W. Burkhardt, of Fowlerville, for inspection, Mr. Burkhardt being chairman of the arbitration committee of three. If Mr. Burkhardt, after examining the sample, reports that it is 'fancy screened Michigan pea beans,' Mr. A. must accept the car. Otherwise no member of the Michigan association will again sell him beans. If the sample is not what the carload was sold for, why, the jobber must take back the car."

DUTCH SEED TRADE.

Deputy Consul-General E. Vollmer has made a report from Rotterdam on the renewed activity of the Dutch seed trade, in which among other things he says:

"Seed crops are grown from one border to the



ARCHITECT'S DRAWING OF THE SUMMERS SEED HOUSE, MALVERN, IOWA.

capacity of 12,000 bushels. It is especially arranged for the seed business, containing twenty-one hopper bins. On the first floor of this building the cleaners and graders will be located.

The warehouse is 40x60 ft. in size, with a six-inch concrete floor, and is fitted with refrigerator doors so as to be absolutely rat-proof.

There is also an office 16x20 ft. in size in the front of the warehouse and also a retail room 16x20 ft. in size.

The plant is rapidly approaching completion, and promises to be as convenient as it will be otherwise serviceable for the purpose to which it will be put.

THE BEAN CROP OF MICHIGAN.

Michigan has become in the past fifteen to twenty years the leading bean producing state of the Union, and is followed in order by California, New York and Wisconsin. Of the world's estimated 100,000,000 bushels of beans, says a Lenox writer, Michigan produced this year 5,100,000 bushels, on 425,000 acres of 34 counties, averaging 12 bushels per acre. This is about 40 per cent of the annual American consumption.

The handling of this crop has come to be a large and important business. In 1892 there were but fourteen bean jobbers in Michigan eligible for membership in the Jobbers' Association. Now the association has over 200 members; and, to be eligible, a jobber must own a plant, including an elevator. Plants cost from \$3,000 to \$40,000, the average being \$15,000. The Michigan bean jobbers' plants represent an investment of something over \$6,000,000.

"The Michigan association is by far the largest and most systematically organized in the entire country," says the Detroit News. "Its rules for grading beans have been accepted by exchanges in all of the larger cities, by Atlantic Coast exporters and importers, and even by the United States customs. Before the Michigan jobbers worked out

other, and form an important item in the trade with the United States.

"The total declared exports of seeds to the United States through the Rotterdam consulate-general during 1907 amounted to almost \$300,000, divided as follows: grass, \$147; caraway, \$63,052; linseed, \$168; nasturtium, \$767; rape, \$207,657; canary, \$406; flax, \$1,163; mustard, \$7,254; poppy, \$11,984; spinach, \$406. Taking into consideration large shipments through the Amsterdam consulate, the total seed exports to the United States in a good average year may be estimated at from \$450,000 to \$500,000.

"The years 1908 showed a general decline in the volume of trade of many leading articles, and seeds, being to a certain extent luxuries, showed decreased exportation by some \$100,000, the exports via Rotterdam having dropped to \$192,406. With the general business revival during 1909, however, more seeds are again finding their way to America, the exports during the first two quarters of the year being as large as previously, with increased heavy shipments recently, since the harvesting of this season's crop.

"There seems to be a slight upward trend in the prices of the seeds, which mainly interest the American buyers at present. In caraway seed there has been some heavy buying, owing, it is said, to the fact that orders booked for October delivery are proving hard to fill, as supplies are somewhat low. Stocks in brown and white mustard are also a little below normal, poppy seed seems very firm, rape seed is quiet."

Ernest Jones, recently appointed manager of the Farmers' Elevator at Grenfell, Man., was killed by falling a distance of forty-nine feet in the elevator on December 3. He had been adjusting some machinery at the top of the structure, when he missed his footing. He tried to save himself by grasping at spouts, which broke. He is survived by a wife and five small children.

OBITUARY

Julius Richardson, member of the Chicago Board of Trade, died in Los Angeles, Cal., on Thanksgiving morning. He had lived in Chicago until two years ago, when he moved to California.

Peter Damschen, manager of the Farmers' Elevator at Noonan, Williams county, N. D., while starting the engine on December 3, was caught between the engine and belt, breaking a rib that pierced his lung and causing an internal hemorrhage which resulted in his death a few hours later. He is survived by his widow and five children.

W. D. VanWagenen, a grain dealer of Houston, Texas, while despondent, committed suicide in that city recently by sending a bullet through his brain. He had been in poor health for some time. For twenty-five years he had been a resident of Houston and was 56 years old. At one time he was wealthy but lost heavily through speculation, it is said.

Mrs. Stephen Finney, aged 65 years, wife of a wealthy grain dealer at Miami, Ind., was struck and killed by a Lake Erie & Western freight train while walking on a sidetrack at Peru, Ind., recently. She became confused and stepped in front of the train. She was struck by the engine and hauled sixty feet, her neck, skull and back being fractured.

D. W. Yokner, a grain dealer of Colony, Kan., was found dead in his office at that place on November 17, death resulting from natural gas asphyxiation, the gas having escaped from a stove that had no pipe. The office door was forced and the dead body was found stretched on the floor. Decedent was a middle-aged man and is survived by his wife and family.

Albert D. Pickering, who was actively associated with the grain and live stock trade in Chicago for twenty years, died suddenly at Detroit, on November 23. He was a son of A. H. Pickering, who was one of the pioneers of the Chicago grain trade, and a brother of Philander Pickering of Chicago. He was 62 years old and had resided in Detroit since 1898, being auditor of the Salvay Company.

Daniel J. Murphy, one of the oldest traders of the Chicago Board of Trade, passed away on December 9, death resulting from pneumonia. He had been in the pit but a few days before and contracted a severe cold. He was connected with the firm of S. H. Woodbury & Co. up to the time of his death, but had been identified with several other firms in his long career in the pit, including David Dowes and Norton A. Worthington. He was 55 years old and a widower. He is survived by a brother.

John A. Mott, aged 41 years, treasurer of the Shannon & Mott Grain Co., of Des Moines, Iowa, was found dead in his room in a hotel at San Antonio, Texas on November 22. Death was due to apoplexy. J. E. Tahl, a young business man of Chicago, who accompanied Mr. Mott to San Antonio, found the dead body. Decedent had suffered several slight apoplectic strokes in the past few years, the last one while in Des Moines about two months ago. He made the trip to Texas for his health.

James Pollock, aged 65 years, formerly a member of the Chicago Board of Trade, was killed at Millburn, Lake county, Ill., on November 19, in a runaway accident. He was driving a load of hay when his team became unmanageable and he was thrown from the wagon to the ground, striking on his head and dying almost instantly. He retired from the Chicago Board of Trade many years ago, after he had failed, and did manual labor on Lake county farms until he had paid back every dollar of his debts. Then he started a grain business in Millburn and became known as a prosperous merchant.

Willard Hale Sawtelle, for many years engaged in the hay, grain and coal business in Readville, Mass., died recently. He was a member of the Boston Chamber of Commerce and other business organizations. He was born in Lowell, Mass., on January 24, 1849. He was at one time sales agent for a flour concern in Providence, R. I., and in 1882 he went to Detroit, Mich., to superintend a flour mill. In 1889 he became associated with his brother, Frank W. Sawtelle, in the grain and coal business in Readville under the firm name of F. W. Sawtelle & Co. He married in 1882 and is survived by his widow, one brother and one sister.

Edward Reinhardt, a grain dealer of Bird Island, Minn., was killed by being whirled around a revolving shaft in his elevator on November 19. He and his son were removing debris from under the elevator and had to crawl under a shaft of the machinery. The son got out safely but a set screw on the revolving shaft caught the coat of the father between the shoulders and whirled him around. The son ran to the engine and stopped it, but when he returned he found only the mangled remains of his father. Decedent was 46 years old and is survived by his wife and five children. For twelve years he had been manager of an elevator at Stewart, Minn.

HAY AND STRAW

Fire destroyed the warehouse and fourteen carloads of baled hay of the F. W. Clemens Feed Co., at St. Louis, Mo., recently.

The Hillrose Alfalfa Milling, Elevator and Supply Co., of Hillrose, Morgan county, Colo., has been incorporated with \$25,000 capital by O. B. Schooley, David S. Boyd and W. W. Sickels.

Miltonvale, Kan., is to have an alfalfa mill to be owned and controlled by local men. Construction work is under way and it is hoped to have the new plant in operation by the first of the year.

Theodore Schwarzbach, of Galveston, Texas, has been in San Antonio, Texas, to ascertain the feasibility of installing a plant to convert alfalfa into meal. The product would be used as a stock food for cattle.

The Griffin & Shelley Packing House in Gridley, Butler County, Cal., is under bond to a firm of capitalists, who contemplate installing an alfalfa mill. Farmers will be canvassed in an effort to contract 2,000 acres for the production of alfalfa.

Scott, Wagner & Miller, hay and grain merchants of Cloverdale, Cal., estimate that even with a great improvement in business conditions about 100,000 tons of hay will have to be carried over to the season of 1910 from this year's crop.

Figures show that Minneapolis has become the leading hay market of the Northwest, this distinction dating from August 1. Duluth comes second and St. Paul third, the carloads reported being 742 for Minneapolis, 729 for Duluth and 713 for St. Paul.

A business man in the Netherlands has advised an American consular officer that he desires to import American hay into Belgium and Holland. He asserts he will furnish satisfactory references and wishes to get into communication with American exporters of this article along the Atlantic coast.

The Hatch Bros. Alfalfa Mill at Fowler, Kan., has just installed a 35-horse-power gasoline engine to run their packers and allow more power for the grinders. The West mill at Fowler has installed an electric light plant. These mills are running full force and their output shows a steady increase.

Stock to the amount of \$10,000 has been subscribed for an alfalfa mill at Sterling, Kan. The proposition of the Consolidated Alfalfa Milling Co. to install a drying and grinding plant was rejected by the stockholders. It was decided to increase the capital stock to \$15,000. A soliciting committee was appointed.

Kansas has almost one million acres devoted to alfalfa. There was an increase during the year of 13 per cent and an increase in two years of 33 per cent. The average product of Kansas alfalfa yields was worth \$14.44 an acre this year, compared with \$11.80 for wheat and \$10.77 for corn. The best alfalfa fields in Kansas often yield more in a single year than the value of the land.

A traffic department inquiry made in Nebraska recently to learn where alfalfa could be purchased in large quantities for a mill in one of the larger cities revealed that but little may be bought in the state. The smaller mills get only the surplus the farmer and stock raisers have to sell and the demand for feeding keeps the price up. It is declared the mills are in no position to make the price. Alfalfa raising is adding to the traffic of Nebraska railroads.

CONDITIONS AFFECTING THE VALUE OF MARKET HAY.

In summing up the "conclusions" of a bulletin on the above subject (Farmers' Bulletin 362), the author, Harry B. McClure, says:

"(1) A large percentage of market hay, especially timothy, is below a No. 1 grade. The chief reasons for this are: First, meadows are cut for a number of years after the yield has materially decreased and other tame grasses, wire-grasses, and weeds have become so numerous as to prohibit the hay grading either choice or No. 1. Second, in many localities timothy is cut too late. When cut at the end of the blooming period or when the seed is beginning to ripen, it is impossible to secure the natural green color that timothy must have in order to grade choice according to the rules of grading as adopted by the National Hay Association, which are used by most cities having official inspection. As a result of these practices producers are losing thousands of dollars every year.

"(2) There are two main reasons why timothy has for a number of years been regarded as the standard market hay in the eastern half of the United States. First, formerly very little tame grass of any kind was grown for hay in the great tame-hay section; consequently market hay consisted of wild or prairie hay and timothy hay. Second, timothy is a valuable hay for two reasons: It is a very palatable hay, and horses therefore

eat it readily; it has no bad effects, as there is no danger of the horse overeating, and it is non-laxative. For these reasons feeders have become used to timothy for feeding to all classes of horses.

"(3) The writer's investigations lead him to believe that the clover-hay area is increasing each year and that more straight clover and clover and timothy mixed is sent to the market than formerly. The reasons for this increase in the clover area are, first, that farmers are now beginning to realize more than ever before the value of clover in keeping up the crop-producing power of the soil; and, second, that when clover hay is sold from the farm there is less loss of plant food than when timothy hay is sold. Because of the increased amount of clover-mixed hay sent to the market a new grade called light clover mixed has recently been added to the official grades.

"(4) At present clover-mixed hay, especially light clover mixed, brings about the same price as No. 2 timothy. The reason this kind of hay is not in greater demand and does not bring a better price is that feeders do not realize that it contains more nutrients, especially protein, than timothy, and that it will give better returns when fed to horses subject to hard labor, such as heavy hauling and transferring.

"(5) Before the value of any kind of hay can be determined, the feeder must know the purpose for which it is to be fed and its adaptability for such purpose. For example, owners of racing and fancy driving horses feed the choicest of timothy hay, chiefly because it is very palatable, agrees with the horse, and furnishes the required amount of bulk needed in the ration. The purpose in feeding hay to horses doing hard labor is to furnish not only bulk but part of the nutrients, especially protein, required in the ration. For this class of horses good timothy and clover mixed hay will prove more satisfactory than any grade of timothy, being cheaper and containing more nutrients than timothy.

"(6) The most important thing in determining the value of hay is palatability, for if it is not relished not enough will be eaten to furnish much nourishment to the animal. When hay is exposed in the field too long in the hot sun or is subject to rain, its palatability will be lessened, which in turn lowers its market and feeding value. Low-grade hay is not as palatable nor does it contain as much nourishment as the better grades.

"(7) In general there is little if any profit in growing and selling low-grade hay, especially that made from the grasses, for the loss of fertilizing value or crop-producing power of the land amounts to more than the net profit after the cost of curing, baling, etc., is deducted.

"(8) The price of hay land is steadily rising in the tame-hay section, and in order to make a fair profit on the value of the land it will be necessary for the grower to practice the best methods of culture, curing, baling, and selling. Before there can be any material change in the quality of hay sent to the market it will be necessary for farmers to learn the grades of hay, for it is impossible to grow choice hay if the producer does not know what constitutes this grade.

"(9) A proper understanding of the feeding value of market hay and market requirements is greatly to be desired on the part of every one engaged in the growing, handling, and feeding of hay."

TERMINAL FACILITIES FOR HAY.

E. A. Dillenbeck of New York, reporting for the committee on terminal facilities to the National Hay Association, among other things said:

"It is with regret that your committee is unable to report such progress as they had hoped to do at the time of their appointment, as at that time the subject of a union terminal at New York City was being considered, uniting all the trunk lines at this terminal, delivering and discharging all cars of hay in one warehouse, by which means many benefits could have been received, both by receivers and shippers, but we are forced to arrive at the conclusion that for the present at least the subject must be abandoned. Owing to the business depression it is almost impossible to secure any special benefits or improved facilities for the better movement of freights at the various terminals, other than those of the past year, with possibly a few exceptions.

"The track storage charges at New York which were reduced last year at the instigation of the members of the New York Hay Exchange Association, continue to exist, and there has been very little friction in the hay trade in consequence of those charges during the year. Shippers, realizing the advantages obtained, have routed most of their consignments via the New York Central and Erie Railroads, being the only lines that furnish warehouses for the handling of all cars of hay for unloading, inspection, etc. There is only a very small percentage of hay arriving over other lines at New York City terminals, and subject to car service and track storage, and think the foregoing matter is worthy of due consideration by all shippers. The officials of the New York Central Railroad have ever

been ready and anxious to join all of the other trunk lines in the establishment of a union warehouse, and inasmuch as they have been unable to secure the co-operation of other lines, and realizing that their present facilities are inadequate for the increasing business of their terminal, have decided to increase their capacity and improve their facilities for the better movement of hay, and plans have been drawn for the erection of a double decked iron pier on the river front, adjoining their terminal, with all modern equipment for hoisting, lowering, lightening and quick movement of hay.

"The rest of the principal terminals in the East, viz., Boston and Philadelphia, no change of importance has occurred and matters generally are satisfactory.

"At Baltimore there has been no change in the methods, and the business has been handled satisfactorily and without complaint, especially in regard to the weighing, which is done over scales of the warehouse company, but under the supervision of the weighing department of the Baltimore Chamber of Commerce, which issues official weight certificates therefor. These officials not only carefully supervise the weighing of the contents of cars, but are required to carefully examine the scales from time to time and see that they are in good order, always adjusting them before going to work each day.

"At Cincinnati during the past year there has been some improvement in the terminal facilities, which is one of the most important distributing points in the country for hay. The hay warehouses are located so far apart that the cost for switching has heretofore been an important factor. Recently the various railroad companies centering there has made liberal arrangements by which in most cases the switching charge is now absorbed by the road over whose rails the cars arrive, thus all the warehouses are placed practically on an equality and opens the markets to all warehouse owners, regardless of its location upon arrival. This is not confined to grain, but hay is included. A circle is drawn around Cincinnati, taking in nearly all the suburbs (a distance of about 25 miles in diameter, called the "Switching Limits"), and all cars that show a revenue of \$25 or more can be delivered without cost to the shipper, receiver, or to any warehouse within that limit. As the railroad companies have been unable to agree upon a uniform rule, in order to make it understood by shippers, it may be of interest to give the exception to the rule. The C. H. & D. R. R. Company adopted the following: When revenue, point of origin to destination before reduction of switching is not less than \$15 per car, \$2 per car or less; \$18 per car, over \$2 per car to and including \$3 per car; \$20 per car, over \$3 per car and including \$5 per car; \$25 per car, over \$5 per car. The P. C. C. & St. L., and C. C. C. & St. L., and the B. & O. S. W. railroad companies will make free switching to all points within the switching limits on all cars arriving, provided the absorption of the switching charges does not reduce the earnings below \$10 per car. This is a liberal arrangement, and is appreciated by the shippers and receivers. The C. H. & D. R. R. having been absorbed by the B. & O. S. W. R. R. Co., it is natural that the C. H. & D. will soon join with the other roads and adopt the same arrangement.

"In Atlanta, Ga., there has been some improvements. The storage tracks have been enlarged, and capacity for handling hay increased, together with quite a number of new storehouses recently erected.

"At St. Louis very little change has occurred or improvements made, while on the contrary warehouses are diminishing somewhat.

"As to the other principal terminals, your committee has been unable to learn of any changes, notwithstanding our efforts to gather such information from members of the different localities, and inasmuch as no complaints have been presented, we are inclined to believe that matters generally are satisfactory."

A successful demonstration of the practicability of raising alfalfa in southern Illinois has just been made on the farm of Judge John L. Thompson, near Harrisburg, Ill. A third cutting of a ten-acre field of alfalfa has been made. This tract was planted with sweet clover last year and sown with alfalfa seed. Three crops have been cut from this sowing, and the average product at each cutting was one and one-quarter tons per acre. After the third cutting the field looked as green as that of a clover field in the spring.

Alfalfa growers from all parts of the Southwest, including the Pecos, Rio Grande, Mesilla, Mimbres, Gila and Salt River Valleys, organized the Southwestern Alfalfa Growers' Federation recently at El Paso, Texas. Self-protection, better freight rates and a better market for a higher standard of alfalfa is the keynote of the organization. Bradford Hardy of El Paso, was elected president and R. E. Bowden, manager of the Berina-Anthony Farmers' Association, secretary and treasurer. Any association engaged in marketing alfalfa in carload lots is eligible to membership. The annual dues for each association in the federation is \$15. Addresses were made by prominent alfalfa growers.

COURT DECISIONS

[Prepared especially for the "American Elevator and Grain Trade" by J. L. Rosenberger, LL.B., of the Chicago Bar.]

Premises That Must Be Kept Safe for Employees.

The obligation of an employer to provide his employees a safe place, the Supreme Court of Minnesota holds (Thomas vs. Wisconsin Central Railway Co.), extends to the portion of his premises on which they are required to work and such other places as they are expressly or impliedly invited and permitted to use.

Duty of Employer to See to Competency of Employee.

It is the duty of the employer or master, the Supreme Court of Arkansas says (Warren Vehicle Stock Co. vs. Siggs), to see that the servant is competent for his position. There is an obligation resting on the master to see that the servant possesses the ordinary mental and physical qualifications that will enable him to do the work without exposing him to greater dangers than the work necessarily entails. If the master knows that the servant, by reason of his ignorance or inexperience, is unable to appreciate the dangers of the employment, it is his duty to give him such instructions and warning of the dangers incident to the work as will reasonably enable such servant to understand the duties of the work required and its perils.

Liability for Rent After Destruction of Premises.

The rule of the common law is that the destruction of leased premises during the term of the lease, by fire, inevitable accident, the violence of nature, the act of a public enemy, does not relieve the tenant from an express covenant to pay rent, unless it is stipulated in the lease that there shall be a cessation of the rent in such case, or unless the lessor has covenanted to rebuild in such case. A limitation or exception to this rule is that, if the destruction of the lease or premises is complete—nothing remaining, the subject-matter or thing leased no longer existing—then the liability of the tenant for rent ceases. To illustrate: If a farm is leased, and the buildings are destroyed by fire, the tenant is still liable for rent; but if a room only of that house had been rented, or one story only, and the house was destroyed completely, the tenant would not thereafter be liable for rent. If the room or story rented was only partially destroyed or injured, however, the rule would be different, though some of the courts have held that there is no limitation or exception to the rule that the tenant remains liable for rent, notwithstanding there is an entire destruction of the building and of the lease, even where only a room, a story, or a certain apartment is let, which carries no interest in the land itself. But some of the Western states, the Supreme Court of Alabama says, in O'Byrne vs. Henley, have adopted an intermediate rule of prorating, or apportioning, the loss. In many states the subject is now controlled by statute when there is no special contract.

Without Authority to Speculate On Board of Trade.

In Farmers' Co-operative Shipping Association vs. George A. Adams Grain Co., 122 Northwestern Reporter, 55, the Supreme Court of Nebraska holds that an agent or manager of a corporation, organized under the laws of that state for the purpose of buying grain and live stock direct from producers and selling and shipping the same to the general markets and the operation of grain elevators to be used incidentally for that purpose, has no apparent authority to engage in speculations in grain and mess pork upon the Chicago Board of Trade; and where the evidence shows that no actual authority was given the agent to engage in such transactions, and they were carried on without the knowledge or consent of any of the officers of the corporation, it will not be bound thereby.

A corporation so organized, with an authorized capital stock of \$10,000 and a limitation to the amount of its indebtedness to \$2,000, has no power to engage in speculative transactions in mess pork and grain upon the Chicago Board of Trade, amounting in a single day to more than \$40,000; and such transactions are *ultra vires* (beyond its corporate powers) and void.

The contract of the agent, or manager in this case, was to operate and manage the elevator of the company, situated at a specified point, and to perform all work incident to said operation and management. Under this contract his authority was limited to managing the grain elevator referred to; and as incident to that management he would have the power to buy grain for future delivery at said elevator and advance a part of the purchase price thereon to responsible parties; but this would not include the buying of grain on margins with advancements through a broker to parties whose identity, as well as their solvency, would be utterly unknown to him. The contract gave him no per-

mission to engage in speculations on the Board of Trade, even if such trades had been bona fide transactions. The authority of an agent does not extend to any matter or transaction which is not properly incident to the management of the ordinary business of his principal.

Liability For Delay of Telegram Accepting Bid For Wheat.

In order to charge a telegraph company with liability for damages growing out of its neglect to correctly transmit a dispatch ordering the purchase or sale of a certain commodity, the Supreme Court of Oklahoma holds (Western Union Telegraph Co. vs. Blackwell Milling & Elevator Co., 103 Pacific Reporter, 717), that it is not necessary that the message should on its face disclose the nature of the business, so that the operator may understand its meaning as to the article, quantity, quality, and price. If enough appears in the message to show that it relates to a commercial business transaction between the correspondents, it will be sufficient to charge the company with damages resulting from its negligent transmission.

A postal card containing the following offer was received by the milling and elevator company:

"Gainesville, Tex., June 29, 1903. We bid you track A. T. & S. F. Ry., Blackwell, acceptance to reach us here by 9:30 a. m. next business day, shipment within 20 days, 2 Red Wheat, 63¾. Wire acceptance to Gainesville. State price when telegraphing acceptance. We reserve the right to reject in excess of 10,000 bushels. Richardson & Co."

The Milling and Elevator Company, in ample time for delivery in due course within its term, answered by cipher message, which, translated, read as follows:

"We accept your bid 63¾ cents, 20,000 bushels wheat, shipment within 20 days. Give shipping instructions."

The address of the sendee was plainly written; but the message was by telegraph company negligently mis sent, and by reason thereof arrived too late. On this account no sale was made, and the Milling and Elevator Company sustained a loss. There was testimony establishing the fact that if the message had been delivered, the amount of wheat offered would have been purchased. It is held that the Telegraph Company was liable for the loss sustained.

The court says that it was not necessary that the Telegraph Company or its operator should know at the time of the receipt of the message that it constituted an acceptance or offer for the purchase of wheat. The undisputed testimony was that the message was sent in what is known as "Robinson's Code," and that with this code the operator informed the agent of the plaintiff he was familiar, and the testimony of the same agent was to the effect that the operator said he knew when he received a Robinson's cipher message that a good deal of money was at stake on a prompt transmission, and that he gave it a preference. In the court's judgment this evidence presented the character of knowledge required, and was sufficient to render the Company liable for substantial damages for and on account of a negligent delay in delivery; and it was not necessary, in order that Company be liable, to show that it or its operator knew at the time of the receipt of the message that the same constituted an acceptance or offer for the purchase of wheat. There might have been no evidence showing that the defendant knew that the message in question related in any particular to this specific commodity, yet the Company would have been liable from the facts showing the operator's knowledge of the value and importance of the message.

ARBITRATION DECISIONS.

Sec'y G. J. Gibbs has forwarded the following decisive arbitrations by the committee of the Texas Grain Dealers' Association:

Geo. Hammond vs. Pittman & Harrison Co.—This is a claim, filed before the arbitration committee of the Texas Grain Dealers' Association by Geo. Hammond of Smith Center, Kansas, against Pittman & Harrison & Co. of Sherman, Texas, the plaintiff alleging that there is a balance due him of \$77.55 on a car of cane seed sold to defendants.

The evidence before the committee shows that on March 20, 1909, defendants bought from plaintiff a car of cane seed, and sent to him a mail confirmation reading as follows:

"Sherman, Texas, 3, 20, '09.

"Geo. Hammond, Smith Center, Kan. Dear Sir: This confirms purchase from you of the following: One car bulk C/seed like sample sent at \$1.70 per cwt., basis Smith Center, Kansas. Route R. I. % H. & T. C. at Fort Worth, Texas. Terms: Sight draft bill lading attached, payable on arrival of car.

"Pittman Harrison & Co.

"Per E. L. D."

The above confirmation contained all the shipping instructions furnished by defendant; and construing the instructions to be that the car should

be shipped to Fort Worth, Texas, plaintiff accordingly, on March 25th, 1909, shipped the car of cane seed to Fort Worth, Texas, routing same R. I. and billing to order, notify Pittman & Harrison Co., % H. & T. C., Fort Worth, Texas. The record shows that plaintiff sent his invoice to Sherman, and that he made draft, bill lading attached, on defendants at Sherman, though the car had actually been shipped to Fort Worth.

On April 5th, 1909, plaintiff was advised by the Railroad Company that the car was in Fort Worth and unclaimed; whereupon the plaintiff immediately wired defendant at Sherman, Texas, to this effect, his wire being dated April 5th, 1909. Defendant replied to this wire by letter under date April 7th, 1909, advising plaintiff that the car was not wanted in Fort Worth, and that same should have been shipped to Sherman, Texas, as instructed. Defendant also stated in this letter that an effort would be made to have the H. & T. C. pull the car on to Sherman.

Defendant wrote another letter on April 7th, 1909, to plaintiff, advising that his draft had been returned and asking him to take charge of the shipment. In this letter defendant offered to take the car at a reduction of 10 cts. per 100 pounds, conditioned that plaintiff would have same diverted to Sherman, and assume the demurrage charges at Fort Worth.

It was finally agreed that plaintiff should accept the reduction of ten cents per 100 pounds on the shipment, and that he should file a claim before this committee. He thereupon paid the demurrage charges at Fort Worth, amounting to \$12, and delivered the car to defendant.

The question for this committee to decide is, whether or not the defendant furnished sufficiently clear and explicit shipping instructions to plaintiff when confirming the deal. The committee is of opinion that both parties to the controversy were to some extent careless. The shipping instructions sent to plaintiff should have expressed clearly and unmistakably that Sherman was the destination, and for this reason the committee will award to plaintiff the difference of 10 cts. per 100 pounds on the cane seed shipped, which will amount to \$65.55. We will further hold that the demurrage charges of \$12 incurred at Fort Worth shall be assessed against the plaintiff, since there seems to be some evidence to show that he was in doubt as to the actual destination, and that had he wired before making actual shipment, this demurrage charge could have been avoided.

It is therefore ordered that the defendant, Pittman & Harrison Company, promptly pay to plaintiff, Geo. Hammond at Smith Center, Kansas, the sum of \$65.55; and the secretary is instructed to return the deposit fee of the plaintiff.

Fort Worth, Texas, Aug. 24th, 1909.

The following arbitration by the Oklahoma Arbitration Committee is kindly supplied by Sec'y G. J. Gibbs of Texas:

Oklahoma Export Co. vs. R. H. Drennan Grain Co.—On September 9th, 1908, the Oklahoma Export Co. bought of the Drennan Grain Co. four cars of No. 2 hard wheat at 88c per bushel f. o. b. Oklahoma R. I. stations, prompt shipment, Plansifter Mill weights and official grades, cars to be sent to the Plansifter Milling Co.

The confirmations agree with the exception that Drennan Grain Co. simply says destination weights and grades. There was a difference in weight of 8,600 lbs. between the weight at which the grain was billed and that which it weighed out. Only one of the cars show an excessive shortage; and when this appeared the Oklahoma Export Co. called up the Drennan Grain Co., and one of their representatives went to the Plansifter Milling Co. and after an inspection of the car ordered the grain unloaded.

The Drennan Grain Co. offered evidence to show that this grain was weighed out by the Oklahoma City Mill and Elevator Co. and that their weights were correct and should be accepted; but we fail to see how we can evade the contract, which calls on one confirmation for destination weights and on the other for Plansifter weights, which in this case amounts to exactly the same thing, the confirmations calling for the wheat to be delivered to the Plansifter Mill.

The difference on this shortage amounts to \$216.43, but Drennan Grain Co. claims that there was considerable due them on billing applied on this wheat and for which they were not given credit. The parties are not prepared at this time to show the amount or value of this billing.

The board is of the opinion that the Oklahoma Export Co. is entitled to recover of the Drennan Grain Co. the shortage, amounting to \$216.43, less the value of said billing. We, therefore, give judgment in favor of the Oklahoma Export Co. and against the Drennan Grain Co. for the sum of \$216.43 less the value of said billing when the same can be adjusted, this entry to be held open to enable said parties to find and agree thereon.

The cost of this arbitration is assessed against the Drennan Grain Co.

IN THE COURTS

James B. Meharg, a Groton, S. D., grain buyer, has filed a petition in bankruptcy, placing his assets at a little over \$28,000 and his liabilities about \$30,000.

Two judgments were rendered against the Gulfport Grain & Elevator Co., of Gulfport, Miss., by the Harrison County Circuit Court recently, one for \$5,000, and another, in which the concern was a co-defendant with a grocery company, for \$1,400.

The Fourth National Bank of Nashville, Tenn., has sued the National Surety Co., for \$40,000 on the bond of J. H. Weaver, warehouse man for the Kendrick-Roan Grain Co., receivers. It is maintained that this sum was borrowed on fraudulent warehouse receipts.

E. N. Holt was awarded a verdict of \$144.35 against the Farmers' Elevator Co., of Buffalo, N. D., by a jury at Fargo, N. D., recently. Plaintiff maintained that grain was brought to the elevator by a farmer to be sold. Holt claimed part interest in the grain and notified the elevator not to settle for it in full.

Sherman R. Norris, former manager of the Minnesota Grain Indemnity Co., Minneapolis, under indictment on two charges of grand larceny in the second degree, has been released from the Hennepin county jail on bonds of \$2,500. He was surrendered on November 13 by his former bondsmen and had since been confined in jail.

A. M. Fombell, a wholesale grain dealer of Pittsburgh, Pa., shipped a car load of corn to Ellwood City, Pa., recently and was selling it to farmers from the car when the chief of police arrested him for selling without a license. The case was withdrawn, as there was no evidence that Fombell was violating a borough ordinance.

The T. H. Bunch Commission Co., of Little Rock, Ark., has been chartered. The capital is \$100,000, of which amount \$50,000 is subscribed. The directors are T. H. Bunch, who is also president, J. A. Van Etten, A. M. Keith, F. E. Morse and J. J. Mandelbaum. This concern virtually succeeds the T. H. Bunch Grain Co., which recently made an assignment.

Jean Dennis has filed suit against Carson, Craig & Co., Detroit, Mich., brokers, alleging that the concern sold 20,000 bushels of wheat without her consent, though it was held in her name. The defendants maintain that she failed to keep up her margins and that when the market broke they were forced to sell, after notifying her that the margins should be kept up.

After two trials the suit of nine insurance companies, entitled the Montgomery Bluegrass Seed Co., against the Chesapeake & Ohio Railroad Co., to recover \$23,000 for a fire that destroyed the plant at Mt. Sterling, Ky., alleging that a spark from an engine started the blaze, was decided in favor of the defendant by a jury at Richmond, Ky. At the first trial the jury disagreed.

The Josey-Miller Grain Co. filed suit on November 6 at Beaumont, Texas, for \$7,600 against the Texas Grain & Elevator Co., of Fort Worth, alleging that defendant shipped plaintiff Oklahoma corn on Oklahoma billing, instead of Texas corn on Texas billing, which would have allowed plaintiff a milling in transit rate. It is also alleged that the shipment was short and under grade.

Suit has been instituted in the Circuit Court of Kent county, Ky., in behalf of Judd Moore by his next friend, William Moore, against the Cincinnati Grain Co., alleging that last October Judd Moore, aged five years, was injured by being thrown to the ground on account of a defective board walk on the premises rented by William Moore from the defendant. Damages in the sum of \$2,000 is asked.

The Rock Grain Co., of Offerle, Kan., was awarded a verdict of \$637.52 against George W. Lightner by a jury in the district court at Kinsley, Kan., recently. Lightner had contracted to sell the concern 20,000 bushels of wheat at 75 cents a bushel. He quit hauling after about 7,000 bushels had been delivered. The concern asked judgment for 9½ cents on the 16,000 undelivered bushels, which would have amounted to a little over \$1,500.

John Theodore Francis, a New York City grain broker, formerly known as John T. Mug, has filed a petition in bankruptcy with liabilities of \$17,388 and assets of uncertain value. He has only two creditors, the Bishop Hominy Co., of Sheldon, Ill., \$16,788, and Charles C. Ramey of Hackensack, N. J., \$600. An action against him is pending in the New York supreme court to recover \$16,788 by the Bishop Hominy Co., for carloads of meal and grits.

The cross actions of John Shea vs. Chandler Grain & Milling Co., the most complicated as far as points of law are concerned that have ever been contested in Massachusetts, have been on hearing in Lawrence. The court has instructed the jury that the company can recover on Shea's notes. The only difficulty to be settled now is as to the contract of Shea and the company. Shea gave notes for

meal, which was damaged, and an effort is being made to determine whether this had been set aside by the company for him.

The Robb-Bort Grain Co., an Oklahoma corporation whose head office is located in Wichita, Kan., has filed suit against W. F. Bort, one of its chief stockholders, for \$1,000 and interest from June, 1907. The plaintiff alleges the money was paid Mr. Bort out of its fund by J. C. Robb, formerly general manager of the company, with the knowledge of Bort that Robb had no authority to use the concern's money for the purpose of paying his own personal debts.

The creditors of the Hardy Grain Co., bankrupt, with Judge T. A. Lancaster presiding, recently met in Union City, Tenn., to take evidence of the officers of the company. The evidence shows the concern paid out money to several banks and different persons, among whom were some of the stockholders, the day before the assignment was made. No distribution can be made until the contested claims are settled. The personal property of the concern is to be sold.

H. E. Agar, who arranged a false report of his death by drowning to escape those whom he had swindled by grain operations, was found guilty of embezzlement at Princeton, Ind., on November 26. He disappeared in January, 1907, and made it appear that he had fallen from a steamer into the Wabash river and had drowned. He carried heavy life insurance and the insurance companies and creditors instituted a search which resulted in his capture at San Benito, Texas.

In the suit of the McCaull-Dinsmore Grain Co. to garnishee any money or property of Elmer J. Kiddle in possession of his wife, Mrs. Margaret May Kiddle, the court at Omaha, Neb., held that the latter need not answer whether she has any of her husband's money. Plaintiff sued the Kiddle Grain Co. for \$3,000 alleged to be due on a consignment of grain. This was followed by garnishment proceedings. It is alleged by plaintiff that Mrs. Kiddle has between \$15,000 and \$40,000 of her husband's money which he cleared in some big grain deals.

At the trial in Boston, Mass., of ten defendants on the charge of conspiracy to conceal assets of the bankrupt Marshall Hay & Grain Co., of East Boston, Bernard Goldfine testified that an oath was administered to him when he was eighteen years old which made it appear that he was 21. He testified to taking a straw assignment of the book accounts of the Marshall Hay & Grain Co. from Julius Wolfman, a money lender, and a lease of the premises of the bankrupt concern in East Boston. He asserted he signed a paper which was a notice to Albert K. Tapper, to vacate the premises of the Marshall Hay & Grain Co.

Proceedings to test the King Act, passed by the last Nebraska Legislature, which forbids a person, firm or corporation from discriminating between sections, communities or cities by buying products and paying therefor a higher price in one section, community or city than is paid by the same person in another section, regard being had for freight rates, etc., have been instituted against Andrew McGrue, who operates an elevator at Harvard, Neb., for the Updike Grain Co. It is charged that the concern paid more for grain at Eldorado, Clay County, Neb., on a certain day than it did in Harvard, in the same county.

The case of the C. H. Bartlett Co. et al. vs. Hiram N. Ainsworth for \$10,000 ended in a verdict for the plaintiff for \$2,000 at Corunna, Mich. Barrett and others purchased an elevator at Owosso, Mich., from Ainsworth two years ago, the latter signing an agreement not to engage in the elevator business for ten years within a radius of ten miles of Owosso. A year later Ainsworth's son erected an elevator, the father furnishing most of the money, it is alleged. He also assumed part of the management, it is said. Barrett and others then secured a permanent injunction against the further operation of the elevator. Barrett testified that the first year he operated the elevator his profits were \$2,000, while the second year he lost \$1,700.

The Public Service Commission of the Second New York District has dismissed without prejudice the complaint of the Ryan Elevating and Forwarding Co., of Buffalo, against the New York Central & Hudson River Railroad Co., which asked that the commission order the company to publish a freight tariff to the Bennett Elevator, operated by the complainant, to the end that it should be required to supply the Bennett Elevator with cars for the carriage of grain at its so-called "at the east rate." It developed at the hearing that the Bennett Elevator is not situated upon the line of the New York Central or any part of its tracks or switches, but is situated on land adjacent to the tracks of the Delaware, Lackawanna & Western Railroad Co. and has a switch connection therewith. No proof was submitted that the New York Central & Hudson River Railroad Co. was not supplying terminal and elevator facilities sufficient to take care of and accommodate all "ex-lake" grain

traffic offered it in Buffalo. The commission states that it does not appear that any duty devolves upon the New York Central & Hudson River Railroad Co. to employ the Bennett Elevator in its business as a common carrier.

Asserting that a shipment of wheat was not up to expectations the Texas State Flour Mills of Galveston, Texas, has instituted suit against the Moore Grain Co., of Kansas City, for \$2,508.94 in the United States Circuit Court at Kansas City, Mo. The plaintiff alleges it bought 20,000 bushels of wheat by sample in 1908, but when the wheat arrived it was unsound, weevil-cut, musty, bin-burnt, etc. The wheat was sold instead of being converted into flour, and the amount sued for represents the loss in selling.

Elmer J. Kiddle, president of the Kiddle Grain Co., of Omaha, Neb., was taken into custody recently in connection with civil charges preferred by creditors who believe certain transactions on his part to be suspicious. He was released on \$1,000 bail. Attachments have been secured on what property is discoverable for garnishment. The creditors were prompted by notice of a real estate transfer in an Omaha paper in which Kiddle and wife deeded the lot on which their home stands to a Miss Nellie Rubin for \$1. Just below this was another notice in which Nellie Rubin deeded the same property to Margaret Kiddle. In June last Mrs. Kiddle brought suit for separate maintenance from Elmer J. Kiddle. She also prayed for an injunction restraining him from selling his property. A number of Kiddle's creditors have asked that he be declared a bankrupt. Some of the acts of bankruptcy alleged include the mortgaging of certain lots to the Conservative Savings and Loan Association at a time when it is declared he was insolvent. The petitioners are the E. M. Cassidy Co., Whiting, Iowa, with claims of \$669.36; Wright and McWhinney, Bagley, Iowa, \$541.28; Croysdale Grain Co., Kansas City, \$198.95.

CAPITAL STOCK TAX.

The Government's corporation tax regulations are now ready, and will be mailed to every corporation for registration. Of these there are supposed to be 122,000 subject to tax, and all will become subject to the penalties of the law for immediate registration whether all receive the forms and blanks or not. Those who are not registered and do not receive blanks should apply immediately to the collectors. All the returns are required to be in the collector's hands by March 1, thence to be sent to the Internal Revenue Bureau, where the tax will be assessed and the tax paying corporation will be notified by June 1 of the tax to be paid by July 1.

Secretary MacVeagh has evolved what he believes will be accepted as a fair definition of the term "net income" as used in the tax law. That it will be a satisfactory definition to all corporations is not expected. It was necessary for Mr. MacVeagh to determine first what Congress meant when it spoke of "gross amount of income" and provided that net income should be determined by making certain deductions therefrom. All corporations will be required to report on eight general features of their business before March 1, 1910. This report is to deal with business transactions of the present calendar year. The assessments are to be made and the corporations informed before June 1, 1910, and the assessments are to be paid on or before June 30, 1910. The returns under the eight separate heads will include:

- "First—Total paid-up capital stock.
- "Second—Total bonded and other indebtedness.
- "Third—Total gross income received in the preceding year; also the amount received as dividends on stock of other corporations.
- "Fourth—Total expenses paid out of earnings for the maintenance and operation of the business and properties, setting forth separately all charges, such as rentals or franchise payments, required to be made as a condition to the continued use or possession of property.
- "Fifth—Losses sustained and not compensated by insurance or otherwise, and giving also amounts charged off for depreciation.
- "Sixth—Interest actually paid on bonded or other indebtedness, not exceeding paid-up capital outstanding at the close of the year, and, in the case of banks, showing separately interest paid on deposits.
- "Seventh—Amount of taxes paid.
- "Eighth—Net income, after making deductions enumerated in the foregoing."

The making of false or fraudulent returns is punishable by a fine of not less than \$1,000 nor more than \$10,000, to be imposed on the corporation, and the person responsible for such false or fraudulent return is liable to a fine of not to exceed \$1,000 or one year's imprisonment, or both.

P. G. Melby, who has been buyer at the State Elevator, Grove City, Minn., has been succeeded by Henry Toensing. Mr. Melby is now at his home in Tyler, Minn.

FIRES-CASUALTIES

Fire originating in a hot box did a slight damage to the Farmers' Elevator at Cannon Falls, Minn., recently.

Fire destroyed the feed warehouse of C. Soffel in Long Branch, N. J., on November 21, causing a loss of \$6,000.

Stuart Satterfield was painfully injured as the result of a fall at the Applegate & King Elevator in Atlanta, Ill., recently.

Fire which broke out in the office did considerable damage to the building of the Jackson Grain Co. at Williamsburg, Iowa, recently.

The elevator at Allentown, Ill., caught fire recently from sparks from a passing freight engine and it was only by prompt work that the structure was saved.

The elevator at Bluff City, Fayette county, Ill., containing 8,000 bushels of grain, was totally destroyed by fire recently, causing a loss of \$25,000, partly insured.

Four firemen were overcome by smoke while fighting flames in the grain elevator of Rosenbaum Bros., Chicago, recently. The fire, which originated in a hot box, caused a loss of \$5,000.

Fire of unknown origin destroyed the Minnetonka Elevator at Kermit, N. D., recently, together with contents and two cars loaded with Canadian wheat. The structure contained about 1,000 bushels of grain.

Fire originating in a hot box destroyed the Winter & Ames Elevator at Niobe, N. D., recently. The structure contained 8,000 bushels of wheat and 1,800 bushels of flax. Loss on building and contents was covered by insurance.

Fire, believed to be of incendiary origin, destroyed the grain elevator of Allen Ayrault at Climax, Mich., recently. While throwing water on a nearby hotel that was threatened Leo Snyder fell and was badly hurt. Loss about \$5,000.

The Hayes-Shofner Grain Co. building at Little Rock, Ark., was destroyed by fire on November 18, causing a loss of \$10,000. A new building to cost \$6,000 will be built. In the meantime the business will be cared for by the warehouse on East Sixth street.

The plant of the Owensboro Grain Co., situated on the river front at Owensboro, Ky., was completely destroyed by fire recently. The fire is believed to have originated from an electric light wire. The loss is \$25,000, partly covered by insurance.

The elevator of the Powers Elevator Co. at New Rockford, N. D., was destroyed recently in a fire believed to be of incendiary origin. The fire started in the pit of the elevator. It contained about 3,000 bushels of wheat. The loss is partly covered by insurance.

For the third time in three years a Panhandle engine set fire to Love Bros.' Grain Elevator at Leroy, south of Hammond, Ind., on November 18. The structure, containing much grain, was totally destroyed. Loss, \$10,000, partly covered by insurance.

The Farmers' Elevator at Akron, Iowa, which was erected about a year ago, was destroyed by fire recently, causing a loss of \$5,000. A few thousand bushels of grain were also consumed. The origin of the fire is unknown. The elevator will be rebuilt.

The floor of a section of Rowan & Co.'s warehouse at Tuscarora, N. Y., collapsed with 600 bags of yellow-eye beans recently and dropped into the cellar. In falling it broke the buckwheat scourer, which put the buckwheat mill out of commission several days.

Perry S. White, manager for the Frizell Grain & Supply Co., of Frizell, Pawnee County, Kan., was seriously injured recently by being caught and crushed while loading a car of wheat in the elevator. For a time his condition was critical, but he is slowly recovering.

The \$2,000,000 plant of the Northwestern Malt & Grain Co. at Cragin, Ill., a suburb of Chicago, was damaged by fire on December 1 to the extent of \$5,000. The Belt Line coal chutes, valued at \$100,000, were destroyed. A spark from a locomotive is believed to have started the fire.

Fire believed to be of incendiary origin destroyed the elevator of the Gribben-Alair Grain Co. at new Rockford, N. D., recently. It contained 15,000 bushels of grain. The fire department could do little, as the acid bottles had been removed from the chemical engines. The loss is total, covered by insurance.

A mammoth tank, containing over 10,000 gallons of water and weighing 100,000 pounds, crashed through six stories of the Yates & Donelson Elevator at Cincinnati, Ohio, recently when the supports gave way, and landed in the boiler room. Tons of brick and grain came with it. Engineer Wall was the only person about the engine room

at the time, the other employees having gone to lunch.

The hay and grain warehouse of John B. Stevens & Co. in Tacoma, Wash., was destroyed by fire on December 1. Much hay was in readiness to be shipped on government contract the following day. Loss \$100,000, fairly covered by insurance.

The ear corn elevator and corn cribs of the Rich & Blankenbaker Elevator at Sidney, Ill., were consumed by a fire which probably originated in the engine room recently. The village chemical engine fought the blaze and saved the large elevator.

The "P V" Elevator at Renville, Minn., was blown from its foundation by the high wind recently, the timber underpinning having rotted. The structure contained 9,200 bushels of grain, but none of this was lost or damaged. The elevator was built twenty-five years ago.

Lightning struck the Farmers' Elevator at Palmer, Iowa, recently, doing considerable damage. A hole was made in the north side of the building large enough for one to crawl through. The manager, R. J. Pulley, was in the office when the bolt struck and was knocked off a stool.

The steamer Richardson, with a cargo of over 200,000 bushels of flax, consigned to the Spencer Kellogg Co., of Buffalo, N. Y., foundered in Lake Erie, one mile from the entrance to Buffalo Harbor, on December 9, resulting in the loss of five lives and probably a total loss of cargo, it is reported.

J. F. Meyer, manager of the Townsend-Meyer Grain Co., Croton, S. D., sustained a broken arm and badly injured foot as a result of a fall from the roof of the elevator recently. He slipped on the icy shingles and gradually slid down the smooth surface to the edge of the roof. He dropped twelve feet to the ground.

While walking through the railroad yards at St. Johnsbury, Vt., on December 6, Elisha N. Dunbar, a wealthy grain merchant of Danville, Vt., was struck by a passenger train and thrown against a freight car on a siding. He was badly cut about the head and elbows and one hand was crushed. He was removed to a hospital.

Fire originating in a cob pile near the engine room destroyed the three-story elevator in Shawneetown, Ill., owned and operated by Gale Bros. of Cincinnati, Ohio. A high wind carried the flames to the main building before it was possible to check the fire. Loss, \$15,500, about covered by insurance. The elevator will be rebuilt.

It is believed several unsuccessful attempts have been made to wreck the George S. Irvin Elevator at Jamestown, Ohio. A monkey-wrench passed through the elevator without causing any mishap recently, and at other times heavy articles have been found in the corn. The owners are now carefully inspecting all grain received.

The Ortleigh Elevator Co.'s structure, one of the first to be erected in Ortleigh, S. D., and owned by a stock company, headed by C. E. Anderson, was destroyed by a fire of unknown origin recently. The fire department from Waubay and farmers from Summit assisted in fighting the blaze. The loss was several thousand dollars.

A barge containing 4,000 bushels of corn was sunk recently at the Torras bridge, across the Old River, near New Orleans, La. The corn was being brought out of the Atchafalaya Country to Baton Rouge, La., and as it was passing under the bridge it was caught in a cross current and jammed against one of the piers of the bridge. About 2,000 bushels were saved.

Fire caused by spontaneous combustion and originating in the elevator destroyed the entire plant of the Charles A. Krause Milling Co. at Milwaukee, Wis., on November 22, causing a loss of \$250,000, which is covered by insurance. Because there are no water hydrants within a mile and a half of the scene of the fire, the fire companies were in a position to do little.

Fire believed to be of incendiary origin did damage to the amount of \$50 to the elevator of the Eagle Roller Mills at Hoven, S. D., recently. A reward of \$100 is offered for the arrest and conviction of the person or persons believed to be guilty. The manager was asleep in the office at the time, and with the assistance of citizens he succeeded in saving the elevator.

Wallington Bros.' elevator at Ashland, Kan., is in danger of toppling over and will probably have to be razed and rebuilt as a result of the Santa Fe Railway putting in an additional sidetrack there. Natural drains were dammed and necessary ditches were cut, causing the elevator pit to be flooded by a recent rain and 600 bushels of wheat soaked. The standing water weakened the foundation.

Fire that started in the cupola destroyed the large elevator recently erected by the Interstate Elevator Co. at East St. Louis, Ill. The building, 120x60 ft., was of frame construction with corrugated iron on the outside. The loss is estimated at about \$30,000, with \$18,500 insurance, of which \$11,000 was on the building and \$7,000 on contents. An effort is being made to include Third street in

the fire limits of East St. Louis and in this event a permit will be issued for the rebuilding of the elevator on the site of the old one.

The elevator, mill, boiler room and grain warehouse of A. L. Duncan & Sons at Seaton, Ill., were destroyed by a fire that originated in the boiler room recently. The blaze was discovered by L. G. Duncan, who fought it with a patent extinguisher and suffered a number of bad burns about the face and hands. The elevator contained 30,000 bushels of grain. Loss about \$30,000, with little insurance.

Fire of mysterious origin destroyed the Imperial Elevator and contents at Sedgwick, Alta., on November 24. The fire was discovered beneath the weigh scales and had gained such headway before the firemen arrived that they devoted their energies to preventing a spread of the flames. Loss about \$25,000, covered by insurance. The elevator was of 30,000 bushels capacity and had been completed about three months ago.

FIRES FROM LOCOMOTIVE SPARKS.

The greatest cause of elevator and grain fire losses originates from sparks and live cinders from railroad locomotives.

Railroad locomotives are supposed to be provided with spark arresters or devices of some kind to prevent throwing the live sparks and cinders out of the smokestacks, but it is plainly evident that the engineers and firemen do not use reasonable precaution, but that when they need power and speed, open up the draft by every means regardless of consequences.

At a certain station last fall two fires occurred on the same property within thirty days and in each instance during the day, when the cause was plainly noted as being from sparks from the locomotives switching in the railroad yards.

The elevator fires during the dry spell in September and October last year were numerous from this cause, as all insurance companies will testify.

The elevator owner whose elevator is located on leased right of way comes in for a special hardship and injustice in this matter for the reason that the railroad companies provide in their leases that they shall not be liable for damage by fires, etc., caused by them, while they always make prompt settlements for damage done to property not located on their right of way.

During the dry spell of the fall of 1908 there was almost a continuous burned over strip of land along the right of way of the different railroads in this state through corn fields, stubble and meadows.

In the state of Pennsylvania the fires started by locomotives were so numerous and the damage to property so great that the state railroad commission called upon the railroad companies to show what kind of devices were in use to prevent locomotives from throwing live sparks and cinders and what rules were enforced concerning the use of these devices by engineers and firemen.

The Western Grain Dealers' Association will follow up this matter vigorously to obtain as much relief as possible and every grain dealer is urgently requested to appoint himself a watchman and when he discovers a locomotive throwing live sparks and cinders to advise the secretary of the Western Grain Dealers' Association the number of the engine, the date, etc., so that he may make a definite complaint of the matter to the general manager of the railroad company, or if necessary to the State Board of Railroad Commissioners and if this will not produce results to seek relief by legislation.—Sec'y Wells's Bulletin.

GRAIN THIEVES OUT WEST.

Losses on wheat shipped on flat cars have already begun to be felt by shippers at Walla Walla, Wash., yet the cry for wheat from the Coast is so loud that any available cars must be used. Grain men say there has always been a heavy loss when wheat is shipped in the open, as there are farmer who will slash the sacks as the train stand on the sidings, letting out wheat for their chickens or pigs; or there are others who steal the sacks bodily. Thirty-eight bags were hauled off in one load at Hector siding not long ago, the tracks of whose wagon were clearly visible the next day beside the railway. Shippers recall also in this connection, that three years ago, when similar conditions prevailed, several warehousemen overbilled their cars and demanded payment for the full bill.

F. W. Kuehn, an elevator man and contractor of Glencoe, Minn., passed away recently.

O. P. Boysen, of St. Charles, Minn., who has purchased an interest in the elevator at Lewiston, Minn., has moved his family to that town.

I. W. Tower has succeeded E. W. Brown as buyer for the Davenport Elevator Co. at Luverne, Minn. The latter has gone to the Yakima country in Washington.

PERSONAL

Leonard Johnson has charge of the new elevator at Baker, Ill.

William P. Griffin, an elevator man of Pittsfield, Mass., is seriously ill.

John H. Shirley, formerly of Murrayville, Ill., is now located at Franklin, Ill.

Ira Walters of Edgeley, N. D., is now in charge of the Bagley Elevator at Griffin, N. D.

C. W. Weist has been engaged to take charge of the Poehler Elevator at Henderson, Minn.

Hans Lee, of Glenwood, Minn., is now in charge of the Farmers' Elevator at Audubon, Minn.

Charles Connick of Arlington, Minn., has become buyer for the Pacific Elevator Co., at Akaska, S. D.

Edward Hawn has succeeded C. H. Tyrell as buyer for the Lyon Elevator at Deisem, Lamour county, N. D.

Herman Nett of Lake Wilson, Minn., is now in charge of the Hubbard & Palmer Elevator at Hadley, Minn.

William Culton, formerly an old time grain buyer in Mower county, Minn., is now located at White-water, Wis.

I. C. Davis of Corsica, S. D., is again connected with the King Elevator in the new town of Ravinia, near Wagner, S. D.

F. W. DeLong, of Albert Lea, Minn., is now in charge of the Western Lumber & Grain Co.'s elevator at Garniell, Fergus Co., Mont.

Arthur Reitz has sold his interest in the Armour Roller Mills, Armour, S. D., and will engage in the grain business in South Dakota.

G. E. Bartholomew, of Sanborn, Minn., has secured a position as buyer for the G. W. Van Dusen Co., at Ree Heights, Hand Co., Minn.

R. O. Blair, who is manager of the Consolidated Alfalfa Milling Co., at Great Bend, Kan., has removed his family from Ness City, Kan.

Ludwig Nelson at Lindsborg, Kan., has sold his alfalfa mill for \$12,000 to a company of which A. Beckstrom is president and general manager.

Charles H. Blanke, who represented the Blair Milling Co. in the South for several years, has been placed in charge of the Blair Elevator at Atchison, Kan.

F. A. Starry, who recently purchased the elevator at Ogilvie, Minn., from M. E. Whipple, has removed with his family from Glencoe, Minn., to that place.

Carl Reinecke of Dike, Iowa, has been appointed manager of an elevator at Austinville, Butler county, Iowa. He has removed his family to that place.

Ole Bottem, who is to have charge of the Red Lake Elevator at Badger, Minn., is on the ground assisting in superintending the construction of the building.

The Utah Flax Growing and Milling Co. represents an effort to revive flax growing in that state. The company will both grow flax and build an oil mill.

Arthur G. Roesser, lately on the inspection force of the Buffalo Corn Exchange, has taken a position as deputy inspector with the Cleveland Chamber of Commerce.

Frank Messner, of Hartford City, Ind., will have charge of the new elevator at Mollie, Blackford county, Ind., to be erected by C. F. Davison & Co., of Bluffton, Ind.

H. A. Halvorson, manager of the Farmers' Elevator at Audubon, Minn., has resigned and will depart for Winger, Minn., soon to engage in the mercantile business.

E. Pierce, who has been buyer for the Iowa Elevator Co., at Varco, Minn., has accepted a position with an elevator in Canada and is succeeded at Varco by Leslie Pike.

Dennis G. Lynch, manager of the Amenia Elevator at Hayfield, Minn., was married recently at West Concord, Minn., to Miss Lula Blaisdell, daughter of Mr. and Mrs. E. A. Blaisdell of that village. They will reside in Hayfield.

Charles Peek, who has been employed as buyer by the Columbia Elevator Co., at Andover, S. D., is now in charge of the Farmers' Union Elevator Co.'s house at Langford, S. D. Edward Colberg, former manager, has been transferred to Webster.

The Minneapolis concern that is putting up the grain sheds and the foundation for the elevator to be erected at Harrison, Madison county, Mont., in the spring, has engaged E. L. Dodson as manager. Mr. Dodson will move his family to that place soon.

Referring at length to the decision in the E. G. Rall Grain Company vs. The A. T. & S. Fe Ry. Co. (see "American Elevator and Grain Trade," November number, p. 290, second column), Sec'y Smiley of Kansas says to his members: "If you are hav-

ing trouble in securing cars, we will furnish you the necessary blanks for making the order; and in case of the agent's refusal to accept 25 per cent of the freight charges, make tender in cash, not check, in presence of witnesses, and be particular to retain duplicate copy of the order."

[Bureau of Plant Industry—Circular No. 40.]

A SIMPLE METHOD OF DETECTING SULPHURED BARLEY AND OATS.

BY W. P. CARROLL,

Assistant in Charge of the Chicago Grain Standardization Laboratory.

For years it has been the common practice in some grain centers to subject stained or discolored barley and oats to a process of bleaching in order

dition from the bleaching apparatus to moderately air-tight bins, where it is allowed to remain long enough to finish the process. To prevent heating and to put the grain in a proper condition for shipping, it is moved about after some time in such a manner as will permit the air to pass freely through it, which to a certain extent will remove the acid odor but will not completely remove all of the sulphurous acid, the presence of which will always betray the fact that the grain has been "sulphured."

The method outlined in this circular for the detection of sulphurous acid has been one of the standard methods of ascertaining the presence of sulphurous acid in grain for several years, and a more detailed description of the chemical reactions that take place may be found in any of the later standard text-books on qualitative chemistry. The principle upon which the method is based is to change sulphurous acid into hydrogen sulphid,



FIG. 1.—Chemicals and apparatus used for detecting sulphured grain.

to remove, or at least partially remove, the discoloration and to a certain extent improve the appearance of kernels otherwise damaged. The common agent to accomplish this result is sulphur in the form of sulphurous acid, and the process itself is known by different names, among which are the terms "sulphuring," "bleaching," and "purifying."

The general appearance, especially the color, of barley and oats, has an important bearing in determining their commercial grades and values, and in view of the fact that the bleaching of these grains has become common, and because it is oftentimes difficult to discriminate between grain that has been bleached and grain that is naturally bright in appearance, it was deemed expedient to use a simple qualitative method by means of which the grain merchant or grain inspector could determine whether or not grain has been sulphured. Heretofore the sense of smell or the personal judgment has been the only means available to practical grain men of differentiating between the natural and the bleached grains.

METHOD OF BLEACHING USED.

Sulphur burned in air or in the presence of oxygen becomes sulphur dioxide, a colorless, transparent

which in the presence of lead salt will give a brownish black precipitate. This method has been used in Germany for some years in detecting sulphurous acid in bleached seeds, and in modified forms by chemists in this country for similar purposes. In order to accelerate the test and at the same time reduce the possibility of error to a minimum, so that it can be used by persons other than those familiar with chemical reactions, it has been deemed advisable to make a few changes in the apparatus commonly used.

THE CHEMICALS NECESSARY FOR DETECTING SULPHURED GRAIN.

For the detection of sulphured grain a supply of chemically pure zinc, hydrochloric acid, lead acetate, ferric or platonic chlorid, and distilled water should always be on hand. The hydrochloric acid should be diluted to about 20 per cent of its normal strength by adding four parts of distilled water to one part of acid. The lead acetate must be dissolved in water, and to give the best results the solution is prepared by adding two grams of the acetate for every 98 cubic centimeters of distilled water, which makes practically a 2 per cent solution.

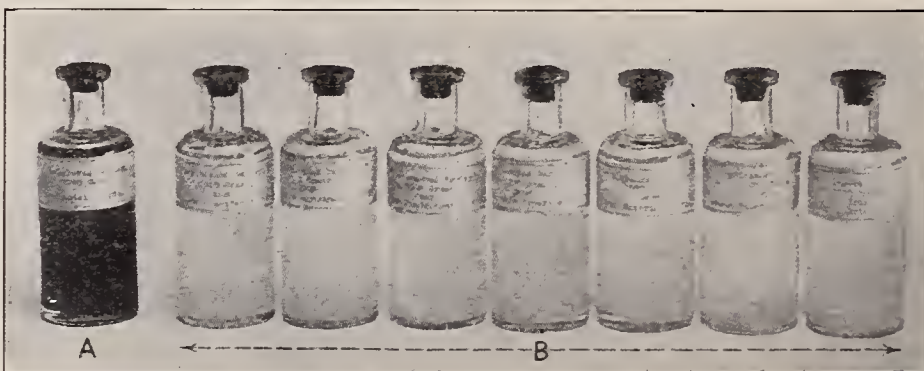


FIG. 2.—Eight bottles filled with solutions, showing the results of tests of sulphured commercial barley (A) and of pure unsulphured barley (B) received from the agricultural experiment stations of Minnesota, Nebraska, Iowa, Wisconsin, Utah, Kansas, and Indiana.

gas with a sharp, pungent odor similar to that found in burning sulphur matches. This gas is very soluble in water, forming sulphurous acid, which is the bleaching agent for barley and oats.

In actual practice, the sulphur is changed to sulphur dioxide by burning in an oven, from which the fumes are conducted to a receptacle or bleaching tower, from the bottom to the top of which the gas circulates, coming in contact with the grain that is constantly passing through the tower. Water must be supplied to change the dioxide into sulphurous acid, as sulphur dioxide is not a bleaching agent. This is done by dampening the grain either with steam or small sprays of water playing upon the grain as it enters the tower.

The bleaching is supposedly brought about by the acid abstracting oxygen from the coloring matter of the grain. Complete bleaching is not immediate, and the grain is therefore conveyed in a damp con-

If the operator desires to make several tests, stock solutions of the proper strength should be made up in quantity. However, if the stock solution of lead acetate is allowed to stand very long it will become scummy and flakes will adhere to the sides of the container. Therefore, it will be necessary to filter it occasionally so that a clear, transparent liquid may always be ready for use when needed.

To perform the test, ten grams of chemically pure, mossy, granular, or shot zinc are distributed over the bottom of a glass container with a capacity of at least 500 cubic centimeters. Upon the zinc are placed about 100 grams of the grain to be tested. Into the flask is poured enough dilute hydrochloric acid to cover the grain, approximately 100 cubic centimeters. The flask is then closed with a cork stopper provided with an inverted "L" glass tube about seven millimeters in internal diameter.

The short arm of the glass tube should project approximately one-half inch below the bottom of the stopper, while the long arm should extend nearly to the bottom of the test tube containing a 2 per cent solution of lead acetate. (See figure.) A test tube of about 15 cubic centimeters capacity is large enough for this purpose and should not be over two-thirds full; otherwise the contents will spill over as soon as the gas begins to pass freely from the zinc and the hydrochloric acid. If the zinc is very pure—that is to say, free from all foreign substances—the action between the zinc and the hydrochloric acid will be retarded, but it may be considerably hastened by the addition of a few drops of ferric chlorid. On the left in the figure are shown two flasks with connections to the test tubes. This figure fully demonstrates how the apparatus is to be adjusted.

When the hydrochloric acid comes in contact with the zinc in the bottom of the flask, hydrogen is liberated and bubbles may be noticed passing up through the grain and then through the lead acetate in the test tube. As soon as the air has been expelled from the flask, these bubbles are either hydrogen or hydrogen sulphid, conditional upon whether the grain is natural or sulphured. With unbleached grain the gas is hydrogen and the bubbles passing through the lead acetate solution will leave the liquid in the tube clear, colorless, and transparent, but with sulphured grain these bubbles will be hydrogen sulphid gas, which produces a brownish black, flocculent precipitate in the lead acetate. This precipitate is lead sulphid, caused by the breaking up of the hydrogen sulphid and the lead acetate, the lead of the latter uniting with the sulphur of the former.

Occasionally fine granules will be seen held in suspension in the lead acetate should the grain be very dusty, and the same conditions will exist if the acid is too strong, because strong acid produces violent action in the flask, which may cause to be carried over some fine particles of dust or zinc. These granules must not be mistaken for lead sulphid.



FIG. 3.—Seven bottles filled with solutions, showing the results of tests of samples containing different percentages of sulphured barley and of samples of natural, or unsulphured, barley from the agricultural experiment stations of Nebraska, Wisconsin, and Kansas.

After the operator has had a little experience he can readily distinguish the granules from the black, flocculent precipitate. It is easy to test these granules by adding a few drops of ferric chlorid (one part of ferric chlorid dissolved in ten parts of distilled water) to the precipitate in the test tube. If the precipitate is lead sulphid it will readily dissolve in the ferric chlorid, whereas the zinc particles and dust will remain practically unchanged. These particles and their consequent annoyance may be obviated to a great extent by screening the grain before it is put into the flask. A still better way, however, to circumvent this difficulty is to place a piece of clean absorbent cotton in the neck of the flask just below the outlet in the stopper, which will serve as a filter and allow the gas to pass through freely, but will retain any solid impurities that may come in contact with it.

NECESSITY FOR CLEANLINESS.

In all cases mixing pans, glassware, and all other apparatus should be clean, and no chemicals should be used that are not chemically pure. These precautions can not be urged or impressed too strongly upon the operator, because other substances might be present in the glassware and chemicals that would perhaps give a reaction similar to that of sulphurous acid. Rubber stoppers contain sulphur in their composition, although not in such a form that it is readily changed to hydrogen sulphid; still, it is advisable to use cork stoppers to avoid any possibility of doubt or controversy. Flasks with ground-glass stoppers, provided with special conducting tubes, are to be preferred in all cases where they are procurable.

TESTS OF NATURAL BARLEY IN COMPARISON WITH SULPHURED BARLEY.

There seems to be a difference of opinion among persons engaged in the grain trade as to whether the precipitate of lead sulphid is procured only from grain that has been sulphured. Some contend that the natural sulphur found in barley rich in protein will give the same precipitate as that

found in sulphured barley and furthermore that different soils will produce barley some of which will show a sulphur reaction. It may be said, however, in this connection, that the natural sulphur found in the protein of 200 or 300 grams of barley is too small to manifest itself in such a test, because the dilute acid has hardly sufficient time to penetrate the interior of the kernels. Moreover, facts do not bear out these contentions, as will be demonstrated.

To ascertain how barley grown on different soils and in different sections of the country would respond when subjected to the test described in this circular, requests were made to the agricultural experiment stations of Minnesota, Nebraska, Iowa, Wisconsin, Utah, Kansas, and Indiana for barley samples that were known to be unsulphured. Each of these stations forwarded samples and a qualitative test of each was made. Four ounces of lead acetate were used instead of 10 cubic centimeters, 1,000 grams of barley were substituted for 100 grams in each case, and the acid and zinc were increased in the same proportion.

In figure 2 the solution in the bottle on the left is of inky blackness in color, indicating a heavy precipitate of lead sulphid. The barley which caused this discoloration was known to be sulphured. The hydrogen which passed through the solutions of the remaining seven bottles was generated in the presence of the natural barley from Minnesota, Nebraska, Iowa, Wisconsin, Utah, Kansas, and Indiana, respectively, but the liquid remained clear and transparent.

The bottle marked A on the left in figure 3 shows the result obtained by generating hydrogen in the presence of commercially sulphured barley and allowing the gas to pass through a solution of lead acetate, as in the qualitative test herein described. The bottles marked B, C, and D show the results of similar tests with natural barley from the agricultural experiment stations of Nebraska, Wisconsin, and Kansas, respectively, while those marked B, C, and D are from the same stations, but have,

respectively, 50 per cent, 25 per cent, and 2½ per cent of sulphured barley added.

The contrast between the precipitate in the two bottles of each pair is readily apparent. The lead sulphid is so abundant in A, which represents a commercially sulphured sample, that the whole solution is black and opaque. The solutions in B, C, and D vary from black turbidity to dull translucency, depending upon the percentage of sulphured barley. Contrasted with the natural barley in each case, the turbidity is very evident, and it is plainly seen that this turbidity decreases from right to left, or as the percentage of sulphured admixture decreases. Numerous other trials were made with sulphured and unsulphured grain, and in each case the same results were obtained.

The judges of wheat at the National Corn Exposition gave the sweepstakes prize on milling wheat to Wisconsin, and "raised a row" by doing so. The principal competitors for the sweepstakes were Minnesota, the two Dakotas and Wisconsin. Wisconsin showed turkey red winter, while Minnesota and the Dakotas entered No. 1 red hard spring life. "Men who were not on the board of awards expressed surprise at the decision," says the Associated Press report, "saying that never before in the history of the country has any grade of winter wheat been found superior to No. 1 spring hard for flouring purposes. So dissatisfied are the representatives of the Great Northern road that they have issued instructions to buy up at any price all of the Minnesota and the Wisconsin exhibits and as soon as the show is over, send to some high-grade mill outside of the states interested and there have them ground into flour. The instructions extend to having the flour tested that the relative value of the two classes of wheat may be thoroughly established. The North Dakota people are even more dissatisfied than those from Minnesota. They do not make charges against the judges, but intimate that their judgment has been badly warped."

TRANSPORTATION

The Erie Canal closed on November 15 after a very successful season.

Lake navigation (with insurance) closed on Sunday, December 5, at midnight.

Detroit has organized the Detroit Freight Association with Robert H. Day in charge.

Car shortage complaints are becoming more and more numerous, and are from all parts of the country.

The American Railway Association has recommended an increase in the car rental per diem, now 25c a day.

Effective December 20, the Vandalia, Big Four, and B. & O. roads will absorb the "bridge arbitrary" on freight east of St. Louis.

The Commerce Commission has again postponed the effective date of the order abolishing the "elevator allowance" from January 1, 1910, to April 1, 1910.

The North Dakota Railroad Commission and the Superior Commercial Club's traffic committee will unite in a petition to the Interstate Commerce Commission asking for a readjustment of the rates from Superior and Minneapolis to the grain country.

The Minneapolis Chamber of Commerce has united with the Minnesota Traffic Association for the handling of mutual traffic interests. The Chamber will have five directors on the new board of managers. W. P. Trickett is executive secretary of the Association.

Work on the Erie Barge Canal is progressing at a fair rate, as is shown in the statement that the cost of completed work is about \$1,000,000 a month. While 194 miles of the canal were under contract in February of this year, 286 miles were under contract on September 1.

The Public Service Commission has negated a petition that the N. Y. Central R. R. Co. be required to publish a freight tariff to their Buffalo elevator which would compel the company to supply cars for carrying grain at the elevator at the so-called "at an east rate."

The New York Public Service Commission has ruled that the carriers are required under the law to furnish cars with bulkheads, grain doors, or some other device for the shipment of bulk freight, or reimburse the shipper if he is forced to go to the expense of so preparing a car.

The Canadian premier has announced that the government will deepen the Welland Canal to a depth not less than 22 feet as soon as the money is available, "which will not be long." The improvement will cost at least \$20,000,000 and give a deep water route from the upper lakes to the seaboard.

The Commerce Commission has decided that the question of determining how to prevent substitution under the milling-in-transit privileges, and to stop abuse of the privileges without hampering its legitimate use, must be taken up again in its entirety, giving all interests a chance to be heard; and a time and place for such hearing will be named.

The Ohio Railroad Commission in a lengthy opinion just published holds that "unless a carrier can show that loss or damage in transit results from an act of God, the public enemy, the authority of laws, or the inherent vice of the shipment itself, it is presumptive evidence that the carrier has been negligent, and therefore is responsible for the loss established."

The largest grain boat in Canadian waters arrived in Midland Harbor from Port William late in November with 527,000 bushels of oats for the Quaker Oats Co. of Peterborough, Ont. This is the largest cargo that has ever been unloaded at a Canadian port. The entire cargo will be taken to Peterborough by the Grand Trunk. The moving of this cargo necessitates the use of about 405 large grain cars and 32 engines, or 16 double headers in all.

Official notice has been received by Sec'y H. A. Plumb of the Milwaukee Chamber of Commerce that on and after February 1, 1910, the basis of all-rail rates to Eastern trunk line territory will be as follows: Milwaukee to New York City: Grain carloads, regardless of point of origin, 16c per 100 lbs.; exception: oats, carloads, when coming from Minneapolis, 15c per 100 lbs. Grain products, including malt, carloads, 16.7c per 100 lbs.; the usual differential of 1c per 100 lbs. will apply via break-bulk lines.

The reconsignment charge of \$2, made by the Eastern Trunk lines, will be continued, the carriers on November 18 having refused to abolish the charge as petitioned for by Philadelphia, New York and Baltimore. The carriers offered in support of their refusal the following paragraph from a decision by the Commerce Commission: "The privilege of reconsignment is a thing of value to shipper and of expense to the carrier, and therefore a charge may be made, but the value and extent of that service vary and the charge should be in pro-

portion to the service. A mere change in consignee must often involve additional clerical work and perhaps additional responsibility and we have concluded to allow \$1."

The Canadian Commons on November 29 passed on first reading a bill amending the Manitoba Grain Act by substituting for the words "license fee of two dollars," wherever they occur in the act, the following: "by authorizing the governor-in-council to fix respective fees and providing fines for contraventions of the act."

Late in November the U. P. Ry. discontinued quotation of grain rates from Kansas points to St. Joseph. On complaint of the commissioner of the St. Joseph Commercial Club, on behalf of local commission houses, the rates will be restored as soon as the Interstate Commerce Commission approves. That probably will be about January 15.

Effective December 2, the Illinois Central Railroad now applies through rates on grain to Eastern trunk line territory (points east of and including Buffalo, Pittsburg, etc.) on the basis of 19½¢ per 100 lbs. to New York from Hendrick, Ind., and Thomas, Ill. This charge makes the specific proportion up to Chicago from these stations 4½¢ instead of 6¢ per 100 lbs., but does not affect stations between Thomas and Kankakee, Ill., from which higher rates obtain. The proportion from Chicago to New York will be 15¢ per 100 lbs.

The C. & N.-W. Ry. has agreed to put into effect the following reconsignment privileges on grain coming from points on the Omaha Ry., effective December 20, 1909: Grain, carloads, originating at stations on C., St. P., M. & O. Ry. in Minnesota (except north of Mankato), Iowa, South Dakota and Nebraska, may be reconsigned from Milwaukee, Wis., to stations Lake Shore Junction to Sheboygan, Wis., inclusive; Lake Shore Junction to Fond du Lac, Wis., inclusive, and Sheboygan to Princeton, Wis., inclusive, at an additional charge of \$2.00 per car.

A fast fleet of Erie Barge Canal boats has been completed at Tonawanda. There are six boats in the fleet, a steamer and five consort. By next spring 48 new boats are to be ready for service by the N. Y., B. & G. L. Trans. Co. This first fleet loaded at Buffalo with oats for New York and passed Utica on November 13. The fleet was in two parts, each propelled by a lighter. The lighter shoved one of the barges and at the end of a long hawser trailed four more. The barges were of a "buxom" type and almost square at the bow and stern, although the bow bulged as much as a yard. They were trim-appearing craft in spite of their hulk. The lighter attracted the greater amount of attention, for it had the resemblance to a yacht with a generous breadth of beam. The front end of this canal-boat is used for sleeping quarters, as well as for carrying cargo, and the rear contains the engine which drives a propeller.

Effective December 15, 1909, the rates on corn, rye, barley and grain or flaxseed screenings, car lots, from St. Paul, Minneapolis and Minnesota transfer, Minnesota, are advanced ½¢ per 100 lbs. to Memphis, Tenn., and on barley, corn, spelt, elevator dust, flour mill refuse, grain or flaxseed screenings, oats, oat clips and rye, car lots, 1¢ per 100 lbs. to Mobile, Ala., New Orleans and Port Chalmette, La. This tariff makes the through rates 17½¢ per 100 lbs. to Memphis, Tenn., 22½¢ per 100 lbs. to Mobile, Ala., New Orleans and Port Chalmette, La., with transit privileges at Chicago. The proportion of the through rates applicable south of Chicago are 10¢ per 100 lbs. to Memphis, Tenn., 15¢ per 100 lbs. to Mobile, Ala., New Orleans and Port Chalmette, La. It should be noted that no change is made in the present rate of 20¢ per 100 lbs. on wheat via Minneapolis to Memphis, which rate applied via Chicago with transit privileges, the proportion south of Chicago being 10¢ per 100 lbs.

WICKERSHAM ON RAILWAY RATES.

Speaking to the Kansas City Commercial Club, Attorney General Wickersham on November 19 suggested a modification of the interstate commerce act in order to procure reasonableness of rates for all and fairness of practice in the operation of interstate railroad lines.

Mr. Wickersham said that one of the fundamental objections urged to the present organization and functions of the Interstate Commerce Commission is that it combines legislative, administrative and quasi-judicial functions. The present system involves constant reversal by the courts of orders by the Commission, conflict of decisions between the different courts and much uncertainty in the law. For the purpose of preventing the conflict of decisions and the delays and uncertainties in the enforcement of the law which now exists, Mr. Wickersham said, it is proposed to create a special tribunal to be known as the Commerce Court, in which shall be exclusively vested all the jurisdiction now possessed by the Circuit and District Courts and the Circuit Courts of Appeals of the United States with respect to the enforcement or review of orders and decrees of the Interstate Commerce Commission. It is further proposed that

all applications for injunctions to restrain orders of the Commission shall be heard by all the judges of this court, whose orders and decrees shall be final, except that an appeal may be taken to the Supreme Court of the United States from final decrees in cases where a constitutional question is involved.

MEETING OF RAILWAY COMMISSIONERS.

The National Association of Railway Commissioners held its annual meeting at Washington on November 17-19. Commerce Commissioner Lane reported the new Demurrage Code prepared by a special committee of the Association appointed for that purpose. In explaining these rules Mr. Lane said that the committee had started out "with the broad proposition that all cars in railroad service are subject to the demurrage rules." Forty-eight hours free time are given for loading or unloading on all commodities, and twenty-four hours for cars held for reconsignment, for cars when destined for delivery to a forwarding line and held for bill of lading, etc., and for cars held for inspection. Mr. Lane further explained that the rules adopted for computing time were based on the principle that the time be computed from the first 7 a. m. after placement and due notice. As to the notification rule recommended, Mr. Lane said it recognized the consignees' right to a notice in writing, but permitted the substitution of other channels. The stringent rules for unloading and loading cars were defended. The legality and efficiency of the average or so-called "debit and credit" rule was upheld by Mr. Lane.

The Code was formally approved by the convention.

The shippers' point of view of transportation problems was laid before the convention by J. C. Lincoln of the traffic bureau of the Merchants' Exchange of St. Louis, Mo., who addressed the convention. In addition to the commerce law referred to in the report below of the National Traffic League's meeting at Chicago, Mr. Lincoln advocated the following also: "The enactment of a law allowing carriers to meet and confer as to tariffs, rates and regulations without violating the law of the land;" and "the creation of a special court to have exclusive and final jurisdiction over questions arising from the orders of the Interstate Commerce Commission except in such instances where constitutional questions would necessitate an appeal from the court to the Supreme Court of the United States."

COMMISSION POWER TO ADVANCE RATES.

The question whether a state railway commission has the power to advance freight rates as well as to order reductions in them, has been decided in the affirmative by the Iowa Commission on the petition of the C. B. & Q. R. R. to have the intrastate rates increased on several commodities. The opinion of the board is as follows:

"1. Freight rates shall be reasonable and just to both railroad and patrons.

"2. The Railroad Commission may on its own motion change or revise schedules, but the rates fixed shall not be higher than established (or fixed) by law.

"3. On complaint the Commission must fix and determine freight charges, which 'shall in no case exceed the one now or hereafter fixed by law.'

"4. It is contended by the contestants that the present schedules in effect were established by law; or, rather, established by the methods which the law prescribes, which it is claimed is equivalent to being established by law.

"It is evident that the entire question turns upon the significance of the words 'established or fixed by law.' In other words, are rates established by the Commission in the manner prescribed by law in fact 'established by law,' as meant by the law-maker? Or what is the legal meaning of the language, 'established by law?'"

"While it may be granted that the legislature has power to authorize a commission to revise rates downward, only, yet such an interpretation has in it an inherent suggestion of injustice; is inconsistent with a law which requires and permits rates to be made which are 'reasonable and just,' and ought not to be adopted unless clearly required by the statute. A rate that is unreasonably low is just as illegal under the statute as though it was unreasonably high; and it goes without saying that an unjust rate is always an illegal rate.

"If it were a settled principle that the railroad commission had authority to revise schedules and classifications downward only, it would of necessity affect the mental attitude of the members of the Commission. It would naturally cause a hesitation in the change of freight rates when there ought to be the utmost freedom in this respect, when warranted by proper conditions, for the reason that it is a well-known fact that conditions do frequently change, and a rate that would be proper under the certain conditions would be confiscatory under other conditions; and in the latter case the Commission would be without power in the premises.

"A good illustration of these changing conditions is in the movement of ice in the proper season in large quantities. At such times railroads can well afford to make a very low rate. It is no answer to say that the established freight rate is only a maximum freight rate and railroads have authority to make a rate as low as they care to, if the statute absolutely requires this Commission to consider a rate voluntarily made by the railroads as *prima facie* a reasonable rate.

"Another fact is worthy of consideration. Commissioners are no more infallible than courts. A rate may be established upon an erroneous conception of facts, or upon facts not fully or properly presented, and which upon more complete presentation might be found to be unreasonable, unjust and confiscatory. Such a rate would be absolutely illegal. Parties in interest ought not to be relegated to the courts for relief unless the statute clearly limits the powers of the Commission. If the law absolutely forbids the Commission from raising a rate already in use, mistakes or erroneous conclusions of the Commission could not be corrected, unless possibly they were patent on their face and indicated clerical or printing mistakes. Nothing but necessity should require the assumption that the statute limits the power of the Commission in revising and changing schedules to 'downward revision.'

"It will be presumed in the absence of a clear declaration to the contrary that when the legislature authorized and empowered the Commission to fix rates so that they should be 'reasonable and just,' that the Commission was authorized to consider every factor which was material in determining the reasonableness and justice, and is not limited to a downward revision which might be unreasonable and unjust and therefore absolutely illegal."

In explaining its interpretation of the words "established by law," as used in the statute, the Commissioners say: "It is plainly evident that the language 'fix or establish by law' contemplated the fact that a maximum schedule of rates would be established by the legislature itself at the same time the law now in force should pass, and clearly shows that the legislative intent contemplated a schedule of rates established by the legislature itself and not a schedule established by a Commission in the manner prescribed by law. The failure of the legislature to establish a schedule at that time merely emphasizes the contention that it decided for evident cogent reasons to postpone the establishing of such schedule until some future time and holds its powers so to do in reserve.

"From all of the above considerations we are clearly of the opinion that the legislature had in mind the ordinary and well-settled legal acceptance in the use of the words 'fix or establish by law,' and that until the legislature itself establishes a maximum schedule the only limitation upon this Commission in revising or changing the schedules is to so revise and change them that they shall be reasonable and just, and therefore legal."

Work on the foundation for the new alfalfa mill at Fairbury, Neb., has been commenced. The mill is to cost \$12,600, will be 36x130 feet, three stories high and will be erected by local capital.

Railroad and city police at Duluth have been having trouble with wheat thieves since the fall run began. Hardly a day has passed that one or more cars have not been discovered broken into.

The increase of the Illinois inspection rate from 35¢ a car to 50¢, thus making the shipper pay 15¢ for the sampling of a car, will be the subject of a hearing by the Railroad and Warehouse Commission at Chicago on December 15, at 2 p. m.

Samples of soft red winter wheat from Russia were received at Chicago the other day by A. O. Slaughter. It was pronounced fully equal to Chicago No. 2 red winter, thus explaining the popularity of the Russian wheat with English millers.

The New York Public Service Commission has had its wings clipped by being deprived by the courts of its control over capital stock of corporations. The Court of Appeals declares that while the Commission has power to protect the rights of the public, the law did not intend that it should become "the financial manager" of corporations or a substitute for the judgment of their directors.

The Farmers' Hall of Fame will be dedicated at the College of Agriculture at Urbana on December 15, when the first of a series of portraits of great farmers will be hung with appropriate ceremonies. The famous one on this occasion will be Cyrus Hall McCormick, the inventor of the reaper. There will be addresses by A. P. Grout, Gov. Deneen, President James, E. J. Baker and L. W. Noyes of Chicago, Lafayette Funk, and Col. Chas. F. Mills. Later on portraits of Jonathan B. Turner, original promoter of the agricultural college; James N. Brown, first president of the Illinois State Fair and a distinguished stock breeder, and Isaac Funk, a type of the successful pioneer farmer, will be placed by the side of that of Mr. McCormick.

BARLEY and MALT

The William Rahr Sons' Co., of Manitowoc, Wis., will erect a \$50,000 elevator as an addition to its malting plant if the city council agrees to vacate the necessary ground. The new plant would cover more than a full city block.

At the meeting of the United States Malsters' Association, held in Chicago recently, delegates expressed great anxiety over the whereabouts of this year's barley crop. The Government report shows a bountiful crop this year, whereas to date there have been 4,000 fewer cars of barley marketed than for 1908. It is believed the farmers are holding the crop.

The Rice Malt and Grain Co., having reincorporated under the name of the Rice Malting Co., has made formal transfer to the new company of the plant properties, consisting of an extensive malting plant and ten acres of land at North avenue and the Belt Line Railway, Chicago. The new concern is a Maine corporation of \$2,000,000 capital, capitalized in Illinois for \$500,000.

The Fond du Lac Malt & Grain Co., which was organized at Fond du Lac, Wis., recently for the purpose of operating a malt house, has mortgaged part of its holdings to the Cole Savings Bank for \$20,000. The concern recently filed an amendment increasing the number of its shares from 100 of \$1,000 each to 200 of \$500 each and increasing the number of directors from four to five.

BARLEY AS FEED IN NEW YORK.

The new barley crop is being marketed with less rapidity than for some years. On the one hand farmers are not seeking to force their grain on what they consider a low market, while on the other the demand is appreciably smaller this year than it has been in preceding years, says the New York Journal of Commerce. Malsters have sufficient stocks on hand to meet the demands from brewers which, in turn, are lighter owing to a decreased consumption of their products.

The greatest falling off in the demand for barley, however, is in its use for feeding purposes. This is in part a result of the lower price of oats and the more abundant supply, but in a very large measure to the conclusion reached by scientific men as a result of experiment, and by stable owners as a result of experience, that whole barley is not a suitable food for horses.

The admixture of barley with oats for feeding purposes began a few years ago when the difference between the prices of the two grains was sufficiently wide to offer an attractive profit. The proportion at that time was about 7 per cent of barley to 93 per cent of oats, and while it so remained it made

really little difference to the horse; but greed on the one hand and the increasing price of oats on the other gradually caused an increase in the proportion of barley until last year it reached in some instances fully 40 per cent. An increased mortality among horses from intestinal troubles brought the question to an issue, but at the same time an abundant oats crop removed the necessity, so that this year there is much less barley being used for feeding purposes. Stable owners who still use it do so in a greatly reduced proportion, while most of the big contractors and delivery establishments have abolished its use entirely.

THE BARLEY SITUATION.

The Government Crop Reporter issued November 1 gives the conditions of the barley crop in percentage as follows: 1909, 83.5; 1908, 89.3, ten years' average 87.4 per cent. In 1908 we had a short crop, and now, 1909, we have a still shorter crop. In 1908 many malt houses were forced to shut down for the want of barley before the season was over. Then, what can we expect next spring?

The receipts of barley up to date have been very disappointing. The visible supply, which should be at its highest at this time, is about half what it was last year, and shows further decreases where there should be increases. What does this all mean to a disinterested observer? The price of barley does not make any difference to me. I would rather see barley at 50 cents than \$1 per bushel, as it will make malt cheaper, and the cheaper the malt, the more of it will be used, and there is where my interest comes in, but we cannot always have our way. Barley is different from all other cereals. The weather conditions two or three weeks before harvest, and during harvest, and after harvest, when barley is in the stack, make or destroy the crop.

Much of this year's barley is too poor to be even used as mixing barley; then, musty barley should not be used for mixing with oats, even if purified. It is dangerous and will discredit the oat and barley mixture as a feed, and I believe it is the best feed for cattle, providing it is rolled, not ground or fed whole. The feed proposition is getting a more serious one from year to year, and barley, as a feed, when better known, will be used more and more. As far back as 1878 J. B. Killebrew, Ph. D., Commissioner of Agriculture of Tennessee, in his book on "Grasses, Cereal and Forage Plants of Tennessee," places barley in the front rank as a cattle food, and says that when barley as a cattle food is better understood and known, will be used more and more. This is of importance to the maltster, with a demand for his screenings and skimmings he can clean his barley more thoroughly, as his loss in that direction will be materially less and he has a cleaner barley to malt.—W. H. Prinz in Am. Brewers' Review.

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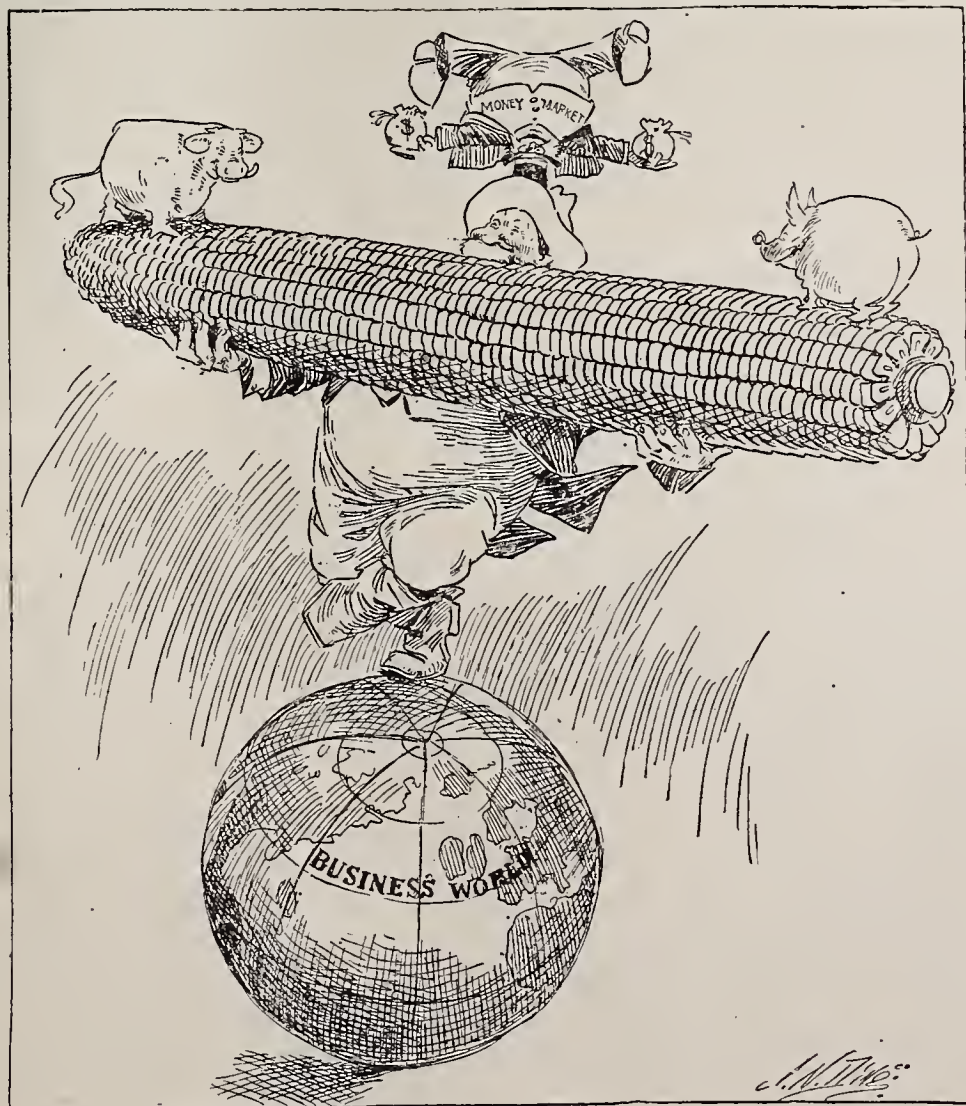
They use nothing but Cold Air and therefore do not affect the insurance rate.

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"THE GREAT BALANCING ROD."—Des Moines Register-Leader.

LATE PATENTS

Issued on November 9, 1909.

Grain Car Door.—Henry J. Bickle and Malcolm McMillan, Gladstone, Man., assignors of one-fourth to Colin M. McMillan, Westbourne, Can., and one-fourth to Charles H. Kenney, Winnipeg, Can. Filed July 23, 1908. No. 939,660.

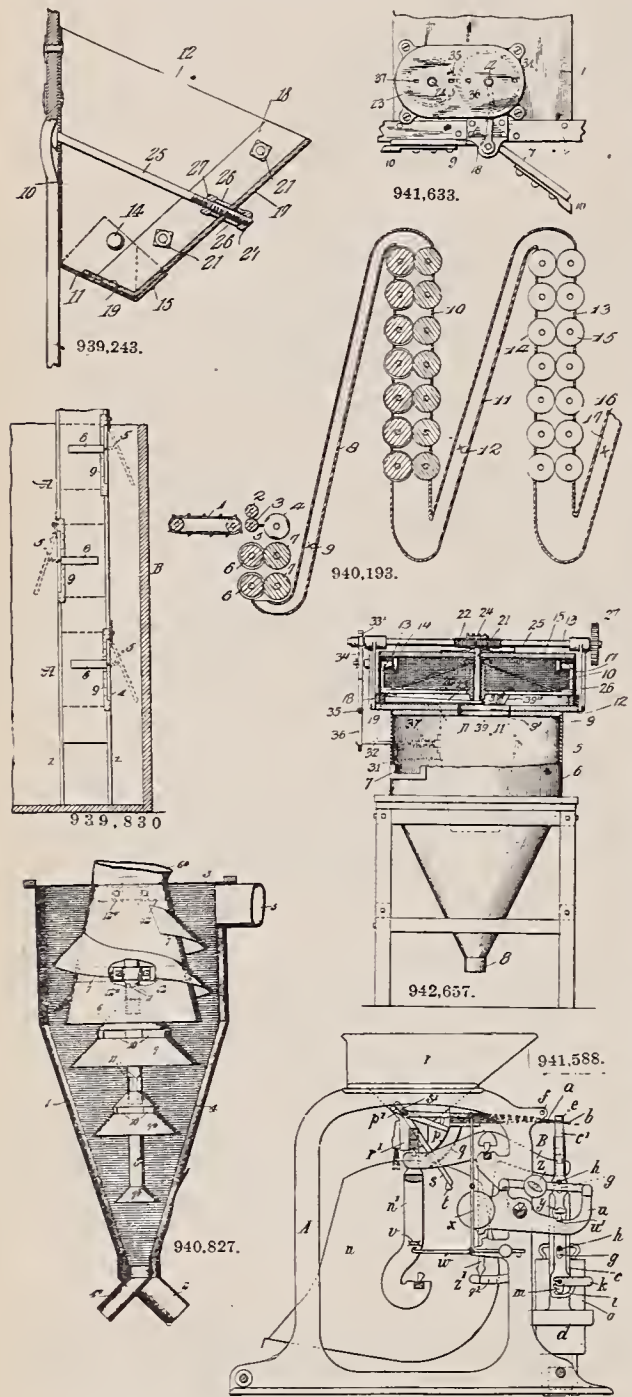
Bean Chute.—Richard A. Haenke and Henry O. Haenke, Mount Pleasant, Mich. Filed February 15, 1909. No. 939,830. See cut.

Conveyor-Bucket.—James B. Gibson, Webb City, Mo. Filed October 9, 1908. No. 939,243. See cut.

Pulverizer.—Milton J. Williams, Chicago, Ill. Filed February 16, 1909. Nos. 939,769 and 939,770.

Pulverizer.—Milton J. Williams, Chicago, Ill. Filed February 16, 1909. Nos. 939,771, 939,772, 939,773, 939,775.

Pulverizer.—Milton J. Williams, Chicago, Ill. Filed February 16, 1909. Nos. 939,776 and 939,777.



Pulverizer.—Milton J. Williams, Chicago, Ill. Filed February 16, 1909. No. 939,778.

Issued on November 16, 1909.

Alfalfa Drier and Mill.—William E. Rickey, Rocky, Okla. Filed July 29, 1908. No. 940,143. See cut.

Grain Drier.—Peter Provost, Milwaukee, Wis. Filed March 23, 1909. No. 940,190.

Magnetic Separator.—W. B. Moore, Walla Walla, Wash. Filed September 23, 1907. No. 940,266.

Separator.—Jonathan M. Seaver, Boston, Mass. Filed August 18, 1908. No. 940,076.

Issued on November 23, 1909.

Bean Separator.—Frederick C. Beitt, Middleport, N. Y. Filed February 13, 1909. No. 941,305.

Grain-Car Door.—Herbert W. Richards, Oak Park, Ill. Filed October 17, 1908. No. 941,099.

Dust Collector and Separator.—Ashley T. Sheward, St. Louis, Mo., assignor to Williams Patent Crusher and Pulverizer Co., St. Louis, Mo. Filed May 17, 1908. No. 940,728. See cut.

Issued on November 30, 1909.

Grain treating apparatus.—Ephraim Sorenson, Emmett, Idaho. Filed March 3, 1909. No. 941,821.

Automatic Weighing Scale.—Michael E. Reiser, Hennef-on-the-Sieg, Germany, assignor to Hennefer Maschinenfabrik C. Reuther & Reiser, M. B. H., Hennef-on-the-Sieg, Germany. Filed September 9, 1908. No. 941,588. See cut.

Automatic Grain-Weigher.—Lloyd S. Godfrey, Binger, Okla. Filed November 10, 1908. No. 941,633. See cut.

Weighing Scale.—Andrew H. Neureuther, Peru, Ill. Filed July 1, 1909. No. 941,725.

Issued on December 7, 1909.

Grain Door for Cars.—Robert C. Russell, Arthur, Ont., assignor of one-fourth to Gomer T. Griffiths, Columbus, Ohio. Filed September 25, 1908. No. 942,221.

Dust Collector.—O. M. Morse, Jackson, Mich. Filed July 10, 1909. No. 942,657. See cut.

Grinding Mill.—George E. Sovereign, Pottersville, N. J. Filed August 10, 1907. No. 942,357.

Grinding Mill.—Joseph Bercha, Beatrice, Neb.—Filed May 4, 1909. No. 942,768.

The CO-OPERATIVES

The Farmers' Elevator at Benedict, Neb., has been paying 8 per cent to its stockholders.

The Manitoba Grain Growers' Association will meet in session at Brandon on December 15-17.

The Farmers' Grain Dealers' Association of Iowa will meet in annual session at Des Moines in February, 1910.

The Farmers' Educational and Co-operative Union of America talks of building "immense elevators in the various counties of Indiana."

The Farmers' Co-operative Grain and Live Stock Association of Nebraska will meet at Lincoln on January 17, 1910.

The Farmers' Co-operative Elevator Co. of Ericson, Ia., has sold its house and business to C. C. Little of Huxley.

The Grain Growers' Grain Co., Ltd., has bought the site of the Hotel du Canada, once a famous landmark at Winnipeg, on which an office building will be built.

The so-called "grain department" of the Society of Equity, at a meeting at Indianapolis, decided to incorporate a company to do a "terminal elevator business" in Illinois, Wisconsin, Minnesota "and such other states as the directors may decide upon."

The Hay & Produce Association of Hennepin County, Minn., has been organized by about fifty farmers of the county, the object being mutual protection in hay deals with commission men of the Twin Cities. The officers are J. B. Reiser, president; P. B. Wolsfeld, secretary; Jerry Theis, treasurer. There are seven members of the directorate. An investigating committee of five has been appointed to inquire into the methods of the handling of hay, manner of disposition by commission men of St. Paul, Minneapolis and Duluth; price received by the commission men from the retailer and consumer and returns made to the shippers; methods of weighing and cause of alleged short weights; alleged exorbitant commissions and illegal charges and the methods employed by the state inspectors in grading hay.

BROWN STATES THE CASE.

H. O. Brown, Grain Commissioner of North Dakota, resident at Minneapolis, has sent out a letter to farmers in that state in which he says:

"In order that the grain growers, independent shippers and farmers' elevator companies of North Dakota might know exactly the business conditions, they would be required to meet, when they have completed their proposed Terminal Co-operative Co., and in order to secure satisfactory terminal facilities, for handling their business, the North Dakota State Grain Commission, whose headquarters are at Minneapolis, was recently handed the following business offer, by one of the leading terminal elevator companies, of Minneapolis:

"They will receive elevator, store and reload out into cars, for delivery to the milling trade, or for export, for an annual storage, of 3 cents per bushel.

"They will furnish storage bins, ranging in capacity from 100,000 to 125,000 bushels or more.

"You will be able to secure advances of money, on all grain, so stored with them, or on warehouse receipts, as high as 90 per cent of the actual cash value of all grain.

"No insurance is necessary, as the terminal elevator is absolutely fire-proof."

F. H. Haverland has resigned as superintendent of the Minneapolis & Northern Elevator at Mohall, N. D., and has been succeeded by J. R. Koller.

The Great Northern Elevator S, at Superior, on November 30 loaded 785,000 bushels of wheat into three steamers between 7 a. m. and 11 p. m., supposed to have been the biggest day's work ever done by an elevator.

CROP REPORTS

The farmers of Butts county, Ga., are sowing the largest grain crop in the history of the county.

From a quarter to a third of Iowa's corn is said to be still in the fields, much of it irremediably ruined.

New wheat has been doing well in eastern Missouri because of sufficient moisture. Prospects for a good crop are bright.

The December report by the Michigan Secretary of State puts the wheat condition at 92, a gain during November and 17 per cent better than a year ago. Rye, 91 against 79 in 1908.

Much land in Sacramento county, Cal., that has been lying idle for several years, will be planted in wheat this winter. Recent rains have put the ground in excellent condition for plowing.

The State Labor Bureau reports a total of 166,563,105 bushels of corn raised in Nebraska this year. The average yield per acre this year was 25.7 bushels. Last year's crop was 178,599,000, or an average of 28.17 bushels per acre. The acreage this year was slightly in excess of that of last year, being 6,477,282, as compared with 6,399,019 last year.

After an automobile trip through the counties of Moore, Hansford, Hutchinson and Ochiltree, in Texas, officials of the Enid, Ochiltree & Western Railroad report that not less than 2,000,000 bushels of spring wheat will be produced in these counties the coming year. Practically all the old acreage formerly grown to milo maize and broomcorn will be devoted to wheat.

According to reports received from different counties by F. D. Stevens, Secretary of the Southwestern Kansas Millers' Association, there is a 10 per cent increase in the acreage of wheat sown the past fall over that of last fall in southern Kansas and northern Oklahoma. Recent rains have put the crop in perfect condition and growers assert they never had a better prospect.

The Board of Food and Drugs Inspection on November 11 published a decision on the label of certain distillers' — grains shipped by J. W. Bless Co. of Cincinnati found guilty of misbranding. The analysis showed that which the label declared 26 per cent protein and 10 per cent fat. The grains in fact contained only 21.22 per cent protein and 9.4 per cent fat. Fine \$1 and costs.

Consul General R. M. Bartleman, of Buenos Ayres, reports that for the year ended July 31, 1909, Argentina takes for the first time first place among the grain exporting countries of the world. During that period the shipments from the three leading countries were: 109,600,000 bushels of wheat from Argentina, 108,000,000 from the United States and 96,800,000 bushels from Russia.

Dr. George M. Chappell, head of the Iowa Crop Report Bureau, has issued his report for the year. He estimates the total valuation of Iowa's crops at \$357,419,615. Corn is rated at 269,812,000 bushels, which is about 30,000,000 bushels less than the government estimate; oats are given as 116,553,830 bushels; winter wheat, 2,739,050; spring wheat, 3,608,910; rye, 805,780; barley, 10,629,300; flax, 255,205; potatoes, 11,209,950.

The Warehouse Commissioner at Winnipeg has announced that the receipts of wheat of this year's crop of western Canada during September, October and November amounted to 41,250,000 bushels and shipments at lake ports 33,000,000 bushels by boat and 1,500,000 bushels by rail, leaving 35,100,000 bushels in the country yet to be exported. December 5 was the last day for insurance of grain cargoes on the Great Lakes.

B. W. Snow's crop report for December estimates the winter wheat acreage seeded at that date at 29,914,000 acres, against a harvested area this year of 27,536,000 acres, with seeding not yet completed on the Pacific coast and some yet in progress in Kansas. The December 1 condition is reported at 96.2, against 78.9 at this date a year ago. The crop is evidently going into winter quarters in little short of perfect condition. Further reports on corn yield make no appreciable change from the figures presented last month, showing a crop of 2,741,000,000 bushels. The quality of the crop is reported a little below that of last year, due to a warm, moist November.

The Crop Reporting Board of the Bureau of Statistics of the United States Department of Agriculture estimates that the newly seeded area of winter wheat is 7.9 per cent more than the revised estimated area sown in the fall of 1908, equivalent to an increase of 2,449,000 acres, the indicated total area being 33,483,000 acres. The condition on December 1 was 95.8, against 85.3 and 91.1 on December 1, 1908 and 1907, respectively, and a ten-year average of 91.5. The newly seeded area of rye is estimated as being 1.2 per cent more than the revised estimated area sown in the fall of 1908, equivalent to an increase of 25,000 acres, the indicated total area being 2,155,000 acres. The condition of rye on De-

cember 1 was 94.1, as compared with 87.6 and 91.4 on December 1, 1908 and 1907 respectively and a ten-year average of 93.9.

Clement, Curtis & Co.'s report on winter wheat acreage indicates a total of 32,264,000, against 29,884,000 last December and 27,871,000 as revised last May. This is an increase of 8 per cent over last December and 15 per cent over the amount left for harvest this spring. The average condition is 94 per cent, against 85.3 per cent reported by the government last year. Several sections of southern Kansas, southern Missouri and southern Illinois report the presence of considerable Hessian fly in the fields.

Oklahoma's 1909 corn crop will be approximately 100,000,000 bushels, according to a statement issued by the Board of Agriculture. This is very little in excess of the crop of 1908, although with a considerably increased acreage. The yield per acre is about 18 bushels, against 22.4 a year ago. Wheat condition is placed at 93, against 87 last December, and 72 last July, when the crop estimated by the Board of Agriculture was 12,200,000 bushels. Acreage sown the past fall is placed at 98 per cent of that sown in 1908, or 1,381,000 acres.

The December report of the Ohio Board of Agriculture shows the condition of wheat improved ten points during November, making it 93. Condition last December was 60, against 56 in November. It advanced afterward to 77 in July and the crop was estimated by the State Board at 27,000,000 bushels, while the latest government estimate was 23,000,000, against 33,000,000 a year ago. The acreage sown during the fall was 1,721,000. The report says 43 per cent of the 1909 crop was sold as soon as threshed, against 44 per cent a year and two years ago. The corn crop is estimated at 121,000,000 bushels, against 103,000,000 bushels a year ago. The average yield per acre of corn is 39 bushels, being unusually high. The quality is satisfactory.

Finley Barrell & Co. on December 3 said that to find out the truth about corn conditions: "We made a letter canvass of the corn belt, sending out over 3,000 personal inquiries to regular grain dealers throughout the surplus producing corn states. We give you herewith the replies received in this canvass to date: Postal card replies—Crop larger than expected, 264 stations; crop about the same as expected, 274 stations; crop smaller than expected, 595 stations; corn in good condition, 265 stations; corn in poor condition, 664 stations. Divided as follows: Illinois, 169 good, 316 poor; Iowa, 67 good, 315 poor; Indiana, Nebraska and Missouri about equally divided. Stations reporting farmers as free sellers, 301; stations reporting farmers holding corn for higher prices, 718."

The Washington state pure feed law will go into effect on January 1. The law provides that mixed commercial feedstuffs sold in that state must be registered at the state agricultural experiment station, and that dealers selling mixed feeds that do not come up to the original samples will be fined; that every package of mixed feed covered by the terms of the law must carry a tag stating the exact number of pounds in the package, the name, brand and trademark, the name of the manufacturer, the name of the manufacturer's principal office, the guaranteed analysis, showing the minimum percentage of crude fat and crude protein; each package must be labeled showing that the feedstuff is registered, tags to cost 1 cent each and will not be sold in less than \$5 lots. The feed dealers object to the law but have decided to investigate it more fully before taking final action against it.

Grain and Seeds

HOT AND DAMAGED CORN WANTED.

We will buy hot and damaged corn of every description. Name prices.

L. F. MILLER & SONS, Philadelphia, Pa.

CLOVER SEED WANTED.

We want clover seed, any quality or condition. Buck horn lots a specialty. Send fair average samples with bottom prices or ask for bids.

C. C. NORTON'S SONS, Greenfield, Ohio.

FLOUR AND MILL FEEDS.

Mixed cars of flour and mill feeds in 100-pound sacks are our specialties. Would like to send you a trial order to convince you of the superiority of our products.

ANSTED & BURK CO., Springfield, Ohio.

For Sale

[Copy for notices under this head should reach us by the 12th of the month to insure insertion in the issue for that month.]

ELEVATORS AND MILLS

FOR SALE OR EXCHANGE.

Ohio, Indiana and Michigan elevators. Have several choice propositions. Let us know your wants. Address

TRI-STATE ELEVATOR CO., Hicksville, Ohio.

FOR SALE.

A 12-horsepower St. Marys Gas and Gasoline Engine, practically new. Complete with standard equipment. Bargain price. Address

JASPERSON SUPPLY CO., St. Marys, Ohio.

FOR SALE.

Elevators in Illinois and Indiana that handle from 150,000 bushels to 300,000 bushels annually. Good locations. Prices very reasonable. Address.

JAMES M. MAGUIRE, Campus, Ill.

FOR SALE.

For sale, a 200-bbl. roller flouring mill complete with elevator in best of spring wheat section. Steam power, electric lights, etc., and everything first class. Price \$12,000, one-half cash, balance easy terms.

TINSLAR LAND CO., Drayton, N. D.

FOR SALE.

Small line of elevators, doing a good business, in the best part of southern Minnesota where crop prospects never looked better at this time of year. Reason for selling, too much other business to attend to. Address

LOCK BOX 99, Henderson, Minn.

FOR SALE.

At Thomas, S. D., on the South Dakota Central Railway, modern, up-to-date elevator, erected during the fall of 1908; size, 28x30 feet; 40-foot cribbing; capacity, 25,000 bushels; also flour shed 28x9 feet; coal shed 16x60 feet, five bins; together with the lots on which the buildings stand. Address

C. E. McKINNEY, Trustee, Sioux Falls, S. D.

OKLAHOMA GRAIN ELEVATORS.

Exceptional bargains in Oklahoma grain elevators located at Rocky, Cordell, Bessie, Thomas, Longdale, Bridgeport, Alva, Enid, Lahoma, Waukomis, Billings, Stillwater, Mehan, Glencoe, Salt Creek, Foraker, Tullahassee, Boynton. Fine openings for good business this fall. Be quick and get in touch with

WEATHERWAX & CO., 9 East Dewey St., Sapulpa, Okla.

FOR SALE.

Small mill, fully equipped and running. Stock of grain, farm implements, phosphates, gasoline, oils, etc. Everthing new and in good condition. Located in flourishing southern Vermont town on main street and railroad. No competition within six miles. Send for complete description. A real opportunity at small price. Owner has other interests. Address

LOCK BOX 218, Readsboro, Vt.

FOR SALE.

Fifteen thousand (15,000) bushel elevator, new last year. All complete with cleaner, Fairbanks Automatic Scale, and Foos Gasoline Engine. Office and scales separate from elevator. In a small growing town in one of the best cane districts of Kansas, also good wheat and corn belt. It more than paid for itself last year. Located on the A. T. & S. F. Priced low if taken soon. Poor health reason for selling. Address

BOX 22, Oak Hill, Kan.

FOR SALE.

I will sell my modern, galvanized-iron-covered elevator, feed and meal mill and warehouse at Claude, county seat Armstrong County, Panhandle, Texas. Only one in county; on private switch Ft. Worth & Denver R. R.; the best grain section. Lot is 250x250 feet, three squares from court house. This is a money maker, with great, growing business. Will accept part cash and part good real estate or merchandise. Address, at once,

J. M. HARTER, Wabash, Ind.

FOR SALE.

Four elevators for sale: White Rock, S. D.; price \$7,000; receipts last year 125,000 bushels; good station, no fight on the market; we made last year at this station \$3,500, and crop prospects for this year are big; capacity 25,000 bushels; have best buyer at White Rock and would want to have him go with the house. Clinton, Minn., 35,000-bushel house; price \$6,000; splendid crop prospects; have the best buyer in that vicinity; will guarantee good profits. Montevideo, Minn., 35,000-bushel elevator; price \$6,000; on the main street; best location in town of only four elevators; immense territory to draw from, and there will be a big and profitable business done at this elevator this year. Granite Falls, Minn., 15,000 bushels' capacity; price \$2,500; has the best buyer in town and gets most of the wheat. We have the above elevators for sale; locations are excellent. We are selling out because we burned out at Montevideo. Address

MONTEVIDEO ROLLER MILL CO., Red Wing, Minn.

MACHINERY

ENGINES FOR SALE.

Gasoline engines for sale; 5, 7, 10, 20, 30 and 45 horsepower.

TEMPLE PUMP CO., 15th Place, Chicago, Ill.

FOR SALE.

A 10-horsepower Fairbanks-Morse Gasoline Engine, used only three days; also one (same make) 7½ k. w. generator complete. A bargain. Address

E. W. WHITE, 405 Sycamore St., Cincinnati, O.

BARGAIN IN ENGINE AND BOILER.

A 20-horsepower engine and 25-horsepower boiler, Atlas make, in good running order. Will sell at a big bargain, as I have just installed electric power.

B. NOFTSGER, Rochester, Ind.

FOR SALE.

One new Improved Dustless Eureka Elevator Separator; built by S. Howes Company; largest size made; good as new. Address

CLEANER, Box 6, care "American Elevator and Grain Trade," Chicago, Ill.

FOR SALE.

Two boilers, 72x18; head, ½-inch steel; shell, ¾-inch; flues, 4-inch; 88 pounds pressure; made by Murray Iron Works Co. Apply

ROSENBAUM BROTHERS, 77 Board of Trade, Chicago.

FOR SALE.

One No. 2 Cornwall Corn Cleaner, good condition excepting sieves; one size 2 Barnard's Dustless Receiving Wheat Separator, first class condition; one No. 2½ Western Rolling Screen Corn Cleaner, and one No. 3 Hercules Corn Scourer in good condition. Bargain if taken quick; need the room.

BOSSEMEYER BROS., Superior, Nebr.

HISTORY OF MAY CORN

My "History of May Corn" Circular B gives exhaustive data, covering the fall marketing season and the question of the ultimate value level.

E. W. WAGNER

98-99-100 Board of Trade

CHICAGO

SCALES

SCALES FOR SALE.

Scales for elevators, mills, or for hay, grain or stock; new or second-hand at lowest prices. Lists free.

CHICAGO SCALE CO., 299 Jackson Boulevard, Chicago, Ill.

Miscellaneous Notices

[Copy for notices under this head should reach us by the 12th of the month to insure insertion in the issue for that month.]

HELP WANTED

WANTED.

Head miller to take charge of 100-barrel mill. One who would take \$3,000 to \$5,000 stock in a first-class mill and elevator. Address.

HARTLEY MILL & ELEVATOR CO., Fartley, Texas.

POSITIONS WANTED

WANTED.

Position in elevator anywhere throughout the corn belt. Am thirty-six years old, ten years' experience at one place. Understand elevator business thoroughly. Can do anything from managing to working in the elevator. Address

JOHN McLAUGHLIN, Box 76, Verona, Ill.

ELEVATORS WANTED

WANTED.

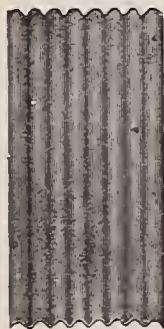
Elevator or mill and elevator for good improved Illinois or Iowa farm. Address

IOWA, Box 1, care "American Elevator and Grain Trade," Chicago, Ill.

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WE manufacture all gauges of corrugated iron, either painted or galvanized. We make Patent Cap Roofing, Roll Cap roofing, "V" Crimped Roofing, Metal Ceilings, etc., etc.

We make a specialty of

Corrugated Iron and Metal Roofing For Grain Elevators

And take contracts either for material alone or job completed. Write us for prices. We can save you money.



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We are Specialists in these grains and
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Active Markets

of late give splendid opportunities for trading in futures of grain and seed. For good service send your orders to Southworth & Co., Toledo, Ohio

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We buy F. O. B. your station for direct shipment to interior points.
Personal attention to consignments.
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Union National Bank, Westminster, Md.

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MINNEAPOLIS, MINN.
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Elevator Capacity 2,000,000 bu.
Has facilities for cleaning, separating, clipping and sacking grain. Receives and stores all rail and lake grain.
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GRAIN, SEEDS AND PROVISIONS

72 Board of Trade

CHICAGO



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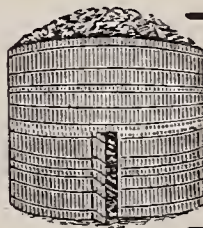
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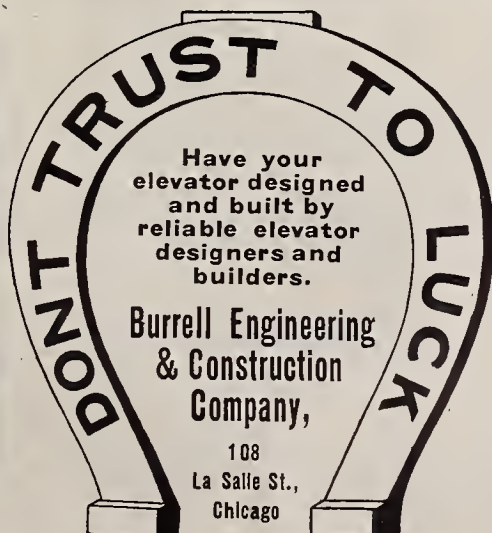
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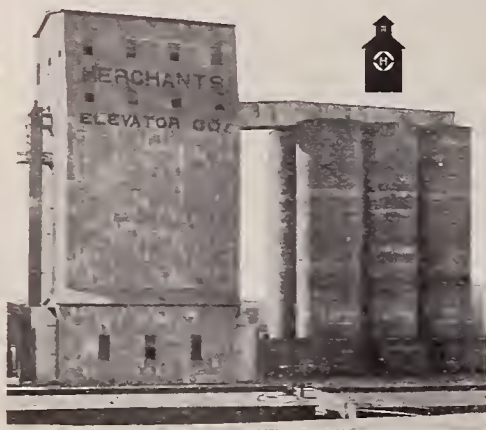
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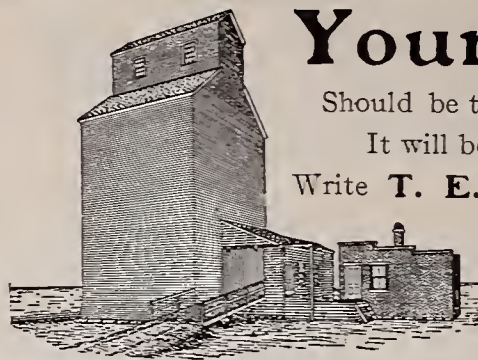
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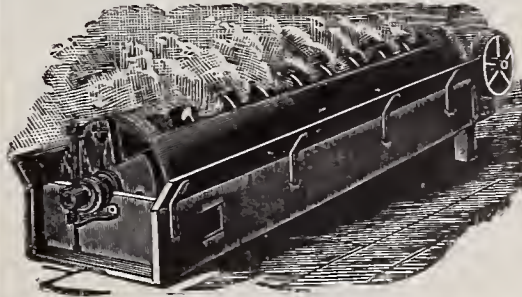
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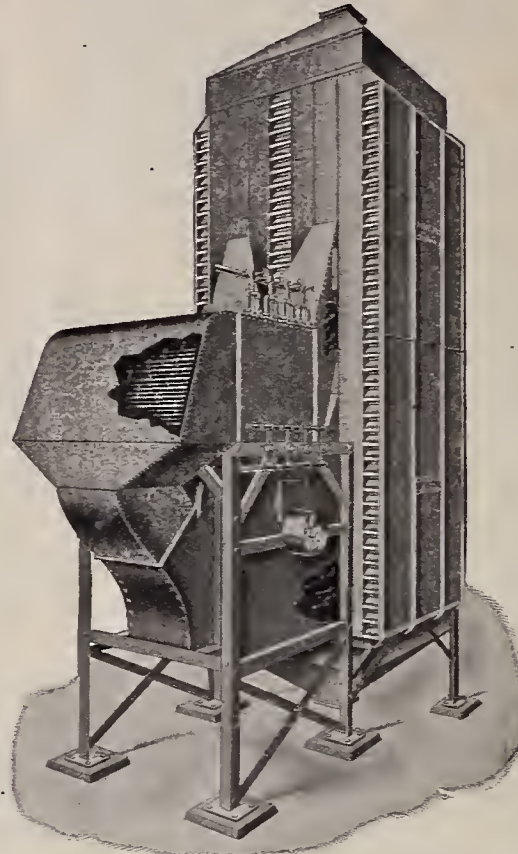
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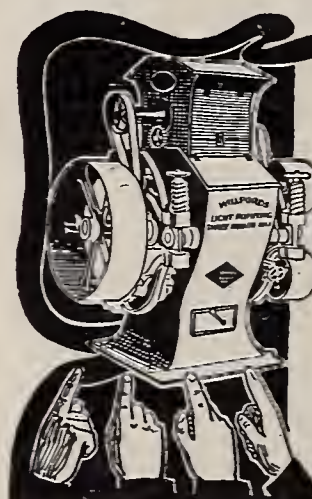
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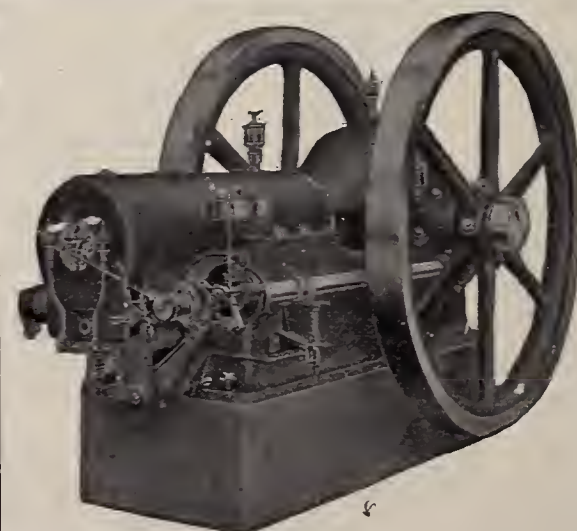


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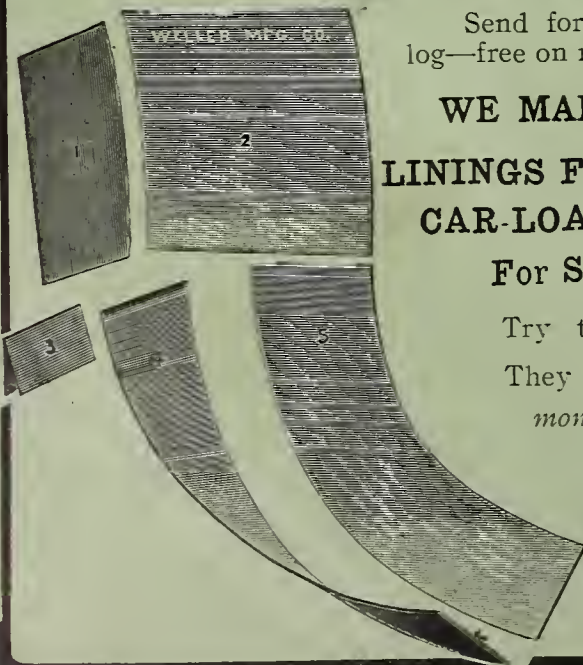
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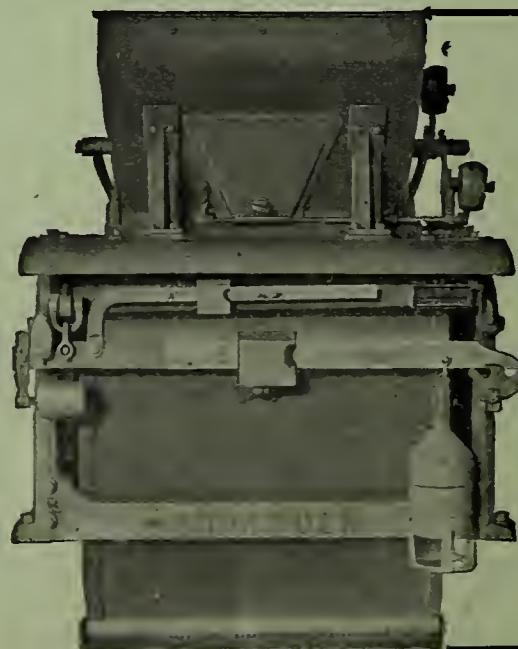
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